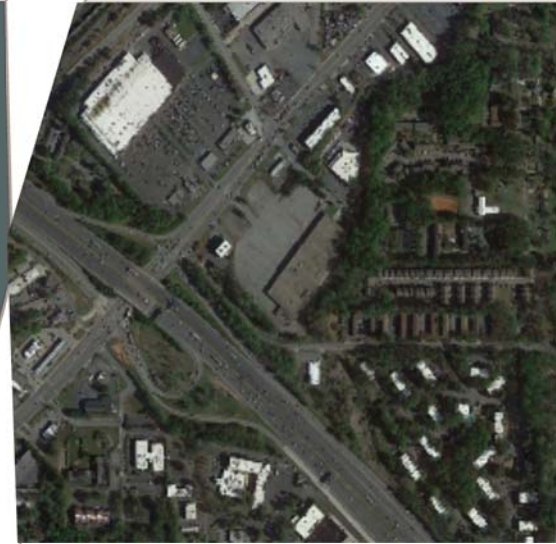


Analysis of Brownfield Cleanup Alternatives

Former K-Mart, 5597 Buford Highway
Doraville, DeKalb County, Georgia

March 2018

Prepared for:
City of Doraville Downtown Development Authority
EPA Cooperative Agreement BF-00D48116-0



Analysis of Brownfields Cleanup Alternatives

Prepared for: City of Doraville
Downtown Development Authority
3725 Park Avenue
Doraville, Georgia 30340
EPA Cooperative Agreement BF-00D48116-0



Project Name: **Analysis of Brownfields Cleanup Alternatives**
Former K-Mart
5597 Buford Highway
Doraville, DeKalb County, Georgia

Submission Date: March 22, 2018

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1 Background

The City of Doraville Downtown Development Authority was awarded a FY 2017 EPA Brownfield Assessment Grant # BF-00D59617-0 in the amount of \$300,000 to assess properties that will revitalize and redevelop the City. The City of Doraville was also awarded a FY 2017 EPA Brownfield Assessment and Cleanup Revolving Loan Fund (RLF) # BF-00D48116-0 in the amount of \$820,000 for the cleanup of hazardous substances and/or petroleum products.

This document we developed to serve as the Environmental Protection Agency's (EPA) Analysis of Brownfield Cleanup Alternatives (ABCA) for the former K-Mart Shopping Center property in the City of Doraville. The subject site was selected for assessment under the Brownfield Assessment Grant for its economic value and is located at 5597 Buford Highway in Doraville, DeKalb County, Georgia.

The site consists of one parcel totaling approximately 13.0 acres that are classified in county records as "C4 - Commercial Small Tract." The parcel ID # is 18 321 08 002. Legal descriptions with a site survey are included as **Attachment A**. On-site improvements of the property include an approximately 117,000 square-foot vacant shopping center that formerly supported a K-Mart and a separate beauty supply store. The building is composed of concrete block units (CMU) on a concrete slab. The remaining portion of the site is paved driveways/parking areas, primarily to the northwest of the on-site structure.

The subject site historically was identified as undeveloped land since with interspersed single-family residences as early as the 1930s. In 1970, the entire site was redeveloped with the current structure and operated as a K-Mart retail store, with an auto repair center on the southwest portion. The facility operated as a K-Mart from 1970 until the early 2010s when it was vacated. In addition, several different tenants occupied the northeast portion of the building, including a restaurant and a beauty supply shop. In association with the auto repair operations, one 1,000-gallon used oil underground storage tank was installed at the site in 1970, and was removed from the ground in 1990.

The following are suspected historical activities that could have contributed to soil and/or groundwater contamination at the subject property:

- On-site auto repair operations
- Hydraulic lifts associated with on-site auto repair operations
- Upgradient BP gas station with historic release
- Upgradient former Exxon gas station with historic release
- Upgradient auto repair operations

Assessment work completed using the referenced grant funds identified impacts from off-site sources as well as the presence of significant quantities of asbestos and some lead paint coated surfaces.

2 Regional Setting and Site Characterization

2.1 Physiographic Setting

The site is located in the Piedmont Physiographic Province. The Piedmont topography is characterized by low, rolling hills in the north and a broad rolling upland or plateaus in the south. The Piedmont is comprised of metamorphic and igneous rocks that are overlain by regolith of varying thickness. The regolith beneath the subject site is composed of semi-consolidated to unconsolidated saprolite (weathered bedrock), soil, and other surficial deposits.

2.2 Site Hydrogeology

Surface water flow from the subject site generally flows to the southeast towards an adjacent tributary of North Fork Peachtree Creek. The subject site is located in the Low Groundwater Pollution Susceptibility Class (Georgia Geological Survey, 1992). Lithology descriptions from the site indicate that the shallow subsurface is composed primarily of sandy micaceous silts and clays (weathered saprolite). Groundwater flow was determined in the latest groundwater sampling investigation to flow towards the southeast. Groundwater was encountered from 15 to 20 feet below ground surface (bgs).

3 Previous Assessment Activities

This section of the documents summarizes the assessment work completed to date upon which corrective action is based.

3.1 Cardno Phase I ESA, December 2017

On behalf of the City Doraville and the City's Downtown Development Authority, through the City's EPA Brownfield Assessment Grant # BF-00D59617-0, Cardno completed a Phase I Environmental Site Assessment (ESA) on the subject property in December 2017.

Based on the findings of Cardno's Phase I ESA results, the following recognized environmental conditions were identified:

- The subject site supported auto repair maintenance operations since its development in 1970 until its vacancy in the early 2010. The facility utilized one 1,000-gallon steel underground storage tank (UST) for used oil which was installed in 1970 and removed from the ground in 1990.
- Two up-gradient adjacent gas stations were identified as leaking underground storage tanks (LUSTs). Both gas stations began operations as early as the 1960s, with one (BP Foodmart) still in operation and the other (Exxon #45787) being closed in 1992. While both releases have achieved no-further-action-required status with the Georgia Environmental Protection Division (EPD), there is still potential for the past releases or a new release from these properties to have impacted the subject site that may require additional investigation and management.
- An up-gradient adjacent auto repair facility (Big 10 Tires / Pep Boys) was identified since the 1980s. There is potential for a release from this property to have impacted the subject site that may require additional investigation and management.

Based on the findings of Cardno's Phase I ESA, the following non-scope issues were identified:

- The former K-Mart building was constructed prior to 1980 and contained several suspect asbestos containing materials (ACM). Suspect materials include floor tiles, wall board and joint compound, mastic, ceiling tiles, caulk, roof shingles, etc. Prior to the disturbance of these materials, it is recommended that they be tested and abated for any ACM.
- The former K-Mart building was constructed prior to 1972 and contains suspect lead-based paint (LBP) coated surfaces. Prior to the disturbance of these materials, it is recommended that this material be tested and abated as appropriate.
- Numerous fluorescent light bulbs were noted throughout the interior of the building, most in poor or deteriorating condition. All fluorescent light bulbs should be disposed of in an appropriate landfill in accordance with local, state, and federal regulations.

3.2 Cardno Phase II ESA, December 2017

Based on the Phase I ESA findings, Cardno requested and was approved to conduct a Phase II ESA under the City's EPA Brownfield Assessment Grant. Cardno performed the following in order to address the issues identified in the Phase I investigation:

- Advancement of seven borings for soil screening and sample collection for a variety of analysis. Specific analysis for each boring are dependent on the findings of the Phase I ESA,

but include benzene, toluene, ethylbenzene, and xylenes (BTEX), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs), polycyclic biphenyls (PCBs), and lead.

- Installation of five groundwater monitor wells for collection of shallow groundwater samples for laboratory analysis for similar constituents as their corresponding borings.
- Performance of a limited asbestos survey and limited lead-based paint (LBP) survey, with the collection of up to seventy-five (75) building material samples to be analyzed for ACMs and up to ten (10) paint chip samples to be analyzed for LBP.

Cardno completed the Phase II ESA in December 2017 and excerpts with site maps and detailed tables are included as **Appendix C**. No other previous investigations were provided to Cardno, and no further investigations have been conducted since the December 2017 Phase II ESA.

In summary, Cardno's Phase II investigation identified the following:

- Minor petroleum contamination in one soil sample collected at boring B-3. Concentrations of ethylbenzene and xylenes exceeded the Georgia EPD Notification Concentrations (NCs) for soil.
- Minor petroleum contamination in two groundwater samples collected at monitoring wells FKM-01 and FKM-03. Concentrations of benzene and naphthalene exceeded the Georgia EPD Media Target Concentrations (MTCs) in groundwater at both locations.
- Groundwater VOC analytical results were run through the EPA Vapor Intrusion Screening Level (VISL) calculator. Benzene, ethylbenzene, naphthalene, and total xylenes exceeded their associated target risks at monitoring well locations FKM-01 and FKM-03.
- Asbestos containing materials were identified in the following building materials:
 - Underlying black mastic under bottom layer of all floor tile, carpet, and ceramic tiles throughout the building, totaling approximately 100,000 square feet.
 - Ceramic wall tiles of the bathrooms, totaling approximately 300 square feet.
- Lead-based paint was identified in the following painted surface:
 - Yellow paint on exterior concrete pole barriers, totaling approximately 250 square feet.

Based on the findings of the Phase II ESA, Cardno recommended the following:

- The minor petroleum contamination identified at boring B-3 and monitoring wells FKM-01 and FKM-03 are associated with off-site gas stations with previous releases. Both historic releases have received a no further action (NFA) required determination from the Georgia EPD. Based on the low contaminant concentrations, the identified contamination is not indicative of a new release and therefore does not warrant additional investigation or agency notification at this time.
- Based on the distance from the contamination, there is no vapor intrusions with respect to the on-site building. However, there is potential for vapor intrusion issues with regards to any future building development that would require additional investigation.

The identified asbestos and lead-based paint should be removed or abated prior to disturbance and/or building demolition in accordance with local, state, and federal regulations.

3.3 United Consulting Limited Asbestos and Limited Lead-Based Paint Sampling. August 2016

After completion of Cardno's Phase I and II ESAs, the prospective purchaser of the subject site, Macauley Investments (Macauley), provided Cardno with a previous United Consulting (United) limited asbestos and lead-based paint (LBP) assessment of the subject site conducted in August 2016 on behalf of the Macallan Group. Excerpts of this report, with site maps and tables of identified materials, are included as **Appendix D**.

United collected 55 bulk samples of suspect asbestos-containing materials (ACMs) and identified the following materials as asbestos containing:

- Black floor tile mastic
- Green floor tile
- Vinyl floor sheeting
- Roof flashing
- Yellow floor tile
- Gray floor tile
- Roof penetration mastics

United collected 22 paint chip samples from various painted surfaces and identified the following materials as LBP:

- White and red interior columns
- Orange interior baseboards
- Red exterior sprinkler
- Yellow exterior sidewalk, barricade posts, and lamp posts
- Grey lamp posts

United recommended that a licensed abatement contractor should remove or abated the identified ACMs prior to disturbance and/or building demolition in accordance with local, state, and federal regulations. United also recommended that if the building were to be demolished, then the demolition debris should be analyzed via the lead toxicity characteristics leaching procedure (TCLP) prior to disposal.

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4 Brownfield Cleanup Alternatives

The following section presents a discussion of the cleanup objectives, alternatives screening process and rationale, alternative analysis, and presents a likely budget for the proposed cleanup

As noted in Section 3, at this point no action is warranted with respect to the documented off-site impacts. As such, current cleanup activities will be limited to abatement of asbestos and lead paint.

However, as will be discussed in Section 5, if localized soil contamination must be addressed in the vicinity of the former auto service area, or if the potential for vapor intrusion must be mitigated, this document will be amended to address the impacted media.

4.1 Cleanup Objectives and Goals

The primary objective of the cleanup alternatives is to reduce or prevent potential risk to human health and/or the environment from site contaminants and/or hazardous building materials used in the construction of the former K-Mart shopping center, as well as any potential unidentified site contaminants associated with the former auto repair center. The cleanup program which is implemented will facilitate the demolition and redevelopment activities.

4.1.1 No Action

The No Action alternative is included as a baseline comparison to other remedial alternatives. The No Action alternative assumes no action is taken and is not a valid option for the site, given the objectives of the demolition and redevelopment without first abating the asbestos and lead paint is contrary to established regulation.

4.1.2 Encapsulation and Partial Abatement

The encapsulation alternative of the asbestos and LBP would entail the complete enclosure of hazardous materials with another material to prevent access. The partial abatement would include the removal of damaged or deteriorating ACM and LBP. However, both options would ultimately require that the building and some if not all hazardous materials remain on site and therefore is not a valid option for the site, given the likely objectives of the demolition and redevelopment.

4.1.3 Full Abatement

Full abatement would include the removal of all LBP and ACMs in accordance with applicable regulations. This alternative is the most appropriate given established project goals which, again, include demolition of the structure and the redevelopment of the site.

4.1.4 Non-Scope Items

In addition to lead-paint and asbestos abatement, Cardno has identified the need to properly manage and dispose of a significant quantity of fluorescent light bulbs and ballasts. These items will be properly managed, characterized, and disposed prior to building demolition.

Access constraints during Cardno's Phase II ESA prevented full assessment of the soils beneath the former auto repair center, as such additional assessment of the underlying soil beneath the former auto repair center may be required after the building is demolished.

4.2 Recommended Cleanup Alternative

The recommended cleanup alternative is the full abatement option together with the proper disposal of fluorescent light tubes and ballasts. Any remedial measures associated with the management of localized impacted soils or vapor intrusion mitigation will be addressed during construction. If future impacts are identified, both GA EPD and EPA will be notified, and this and other project documentation will be updated/amended as appropriate.

4.3 Remedial Costs Analysis

The goal of the project is to address the environmental concerns associated with the building so that the demolition can move forward. Provided below is a summary of costs associated with the full abatement option so that the financial limitations can be evaluated and balanced with respect to available funds provided by the RLF program and other sources. Based on project objectives, no other alternative are presented or analyzed.

Task	Estimated Quantity	Unit Price	Cost
Abatement design and air/project monitoring	Per day cost, minimum 10 days	\$1,000	\$10,000
Floor tile/carpet/black mastic removal	100,000 square feet	\$2.00	\$200,000
Roof penetration mastic/flashing	3,800 square feet	\$5.50	\$20,900
Ceramic tiles	300 square feet	\$2.50	\$750
TCLP analysis of demolition debris to address lead-based paint	10 TCLP samples	\$300	\$3,000
Fluorescent light bulbs and Ballasts	1,250 (estimated based on building size)	\$6.00	\$7,500
Subtotal			\$242,150
Contingency (15%)			\$36,322.50
Total			\$278,472.50

These costs represent an estimate for the abatement work only.

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5 Additional Site Investigation

Additional site characterization, if any, will be performed that tentatively focuses on identifying any contamination not identified in previous assessment, specifically with request to the historic on-site auto repair operations. Due to access restrictions and building conditions, Cardno was unable to collect samples from the interior of the building at the location of the historic auto repair center where in-ground hydraulic lifts were located.

Upon demolition of the on-site building and removal of the building's foundation and concrete slab, if necessary, the underlying soils condition at the location of the former in-ground lifts will be sampled. If warranted, test pits and/or soil borings will be installed to determine the horizontal and vertical extent of impacted media beneath the former in-ground lifts. The installation of soil borings and associated soil sampling activities will be completed in accordance with EPA guidelines in effect at the time the work is performed. All work will be performed in accordance with a site-specific Health and Safety Plan (HASP).

Based on the current analytical data, no additional investigation is required at this time with respect to the off-site issues. However, as the property is to be developed with additional buildings, depending on the locations of these buildings with respect to the identified residual ground water contamination, vapor intrusion potential may need to be assessed and abated.

Upon verification of the locations of future development, if necessary, soil gas vapor intrusion potential may be evaluated. At that time, it is proposed soil gas sampling be completed in accordance with EPA guidelines in effect at the time the work is performed and/or in accordance with a site-specific EPA QAPP amendment and under a OSHA compliant health and safety plan.

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6 Schedule

It is anticipated that all work will be completed by the close of 2019.

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7 Applicable Regulations and Cleanup Standards

7.1 Cleanup Standards

Though cancer risk from exposure to asbestos is most appropriately viewed as a chronic concern, short-term standards have been established by OSHA's permissible exposure limits (PEL) to limit exposures to workers in the workplace. There are two types of short-term limits, as follows:

- Short-term exposure limit (STEL) – 1.0 fibers per cubic centimeter (f/cc), analyzed by Phase Contract Microscopy (PCM)
- 8-Hr Time weighted average (TWA) – 0.1 f/cc, analyzed by PCM

For LBP, the OSHA limits lead exposure to workers in the workplace with the following standard:

- 8-Hr TWA – 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

EPA Asbestos Hazard Emergency Response Act (AHERA) regulations (40 CFR 763) require aggressive clearance sampling after asbestos abatement activities. Leaf blowers and fans are used to disturb the interior air and air samples are collected according to the standard methods set forth in Appendix A of Subpart E of 40 CFR Part 763. The clearance criterias as set forth in this regulation are:

- PCM clearance: 0.01 f/cc
- Transition Electron Microscopy (TEM) clearance: 70 structures per square millimeter (structures/ mm^2)

Although AHERA regulations apply to abatement in schools, the same standards are generally used for all abatement projects.

Georgia law established the following clearance limits for abatement projects:

- 40 micrograms of lead in dust per square foot on floors;
- 250 micrograms of lead in dust per square foot on interior window sills;
- 400 micrograms of lead in dust per square foot in window troughs; and
- 800 micrograms of lead in dust per square foot on exterior concrete

7.2 Applicable Laws and Regulations

7.2.1 Asbestos Laws and Regulations

Asbestos is regulated by the AHERA, the Toxic Substances Control Act (TSCA), the Clean Air Act (CAA), and Georgia Environmental Rule 391-3-14 and Official Code of Georgia Annotated §12-12-1. Further, to protect asbestos abatement workers all asbestos abatement work must be performed in accordance with Occupational Safety and Health Administration (OSHA) asbestos regulations as promulgated in Title 29 of the Code of Federal Regulations (29CFR), Section 1926.1101.

The following work practices should be followed whenever demolition/renovation activities involving asbestos-containing materials occur:

- Prepare abatement specifications by a EPA licensed Asbestos Designer;
- Notify the Georgia EPD of intention to demolish/renovate by the required notification form;
- Remove all asbestos-containing materials from facility being demolished or renovated before any disruptive activity begins;
- Handle and dispose of all asbestos-containing materials in an approved manner (USEPA, 2006a; Asbestos/NESHAP Regulated Asbestos-Containing Materials Guidance);
- Monitor asbestos abatement activities by a EPA Licensed Asbestos Abatement Supervisor;
- Perform air clearance testing upon completion of asbestos-containing materials abatement; and
- Prepare an asbestos abatement Compliance Report.

7.2.2 Lead-Based Paint Laws and Regulations

Lead-based paint in pre-1978 housing and children-occupied buildings is regulated under the authority of the Toxic Substances and Control Act (TSCA; 15 U.S.C. 2601 et seq.) as amended by the Residential Lead-Based Paint Hazard Reduction Act of 1992, generally referred to as Title X (of The Housing and Community Act of 1992 - Public Law 102-550). Title X mandates the training, certification and licensing of lead-based paint abatement contractors, inspectors, risk assessors, and the training and certification of abatement workers and project designers. The Act also amended the Toxic Substances Control Act section 402 & 403. The provisions of Title X apply to residential buildings and child-occupied facilities.

Georgia EPD rules established the following clearance procedures shall be conducted on all abatement projects by a certified inspector or lead risk assessor after appropriate cleaning has been completed.

- 40 micrograms of lead in dust per square foot on floors;
- 250 micrograms of lead in dust per square foot on interior window sills;
- 400 micrograms of lead in dust per square foot in window troughs; and
- 800 micrograms of lead in dust per square foot on exterior concrete

The Georgia EPD regulates and licenses lead paint consultants and workers under Environmental Rule 391-3-24 and OCGA 31-41-1. lead-containing debris must be handled in accordance with the USEPA RCRA Hazardous Waste Regulations (40 CFR Parts 260 through 274).

The Occupational Safety and Health Administration has published regulations regarding worker safety during activities involving lead-based paint abatement. The Construction Standards (29 CFR Part 1926) and the OSHA (29 CFR Part 1910) promulgate a permissible exposure limit for lead construction workers, including workers performing demolition, salvage, or renovation of lead-containing materials at sections 1926.62 and 1910.1025 as follows:

“The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ($50 \mu\text{g}/\text{m}^3$) averaged over an 8-hour period.” (29 CFR 1926.62) Additional regulations under these chapters address other worker safety precautions such as respiratory protection programs, work practices, and medical monitoring. Lead-based paint debris (material containing or surfaced with lead-based-paint) from commercial buildings may be classified as hazardous waste if lead concentrations exceed the Toxicity Characteristic Rule (40 CFR 261.24, 40 CFR 262.11) concentration limit of 5.0 milligram per liter (mg/L) in sample extract prepared according to the Toxicity Characteristic Leaching Procedure, test Method 1311 in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846.

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8 Certification

I, Douglas Strait, Professional Engineer (PE) #041500, certify that I currently hold an active license in the State of Georgia and am competent through education and experience to provide the geologic services contained in this report. I further certify that this report was prepared by me or under my direct supervision.

Prepared by:

Douglas Strait



Douglas Strait, PE
Georgia Professional Engineer # 041500

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Appendix A

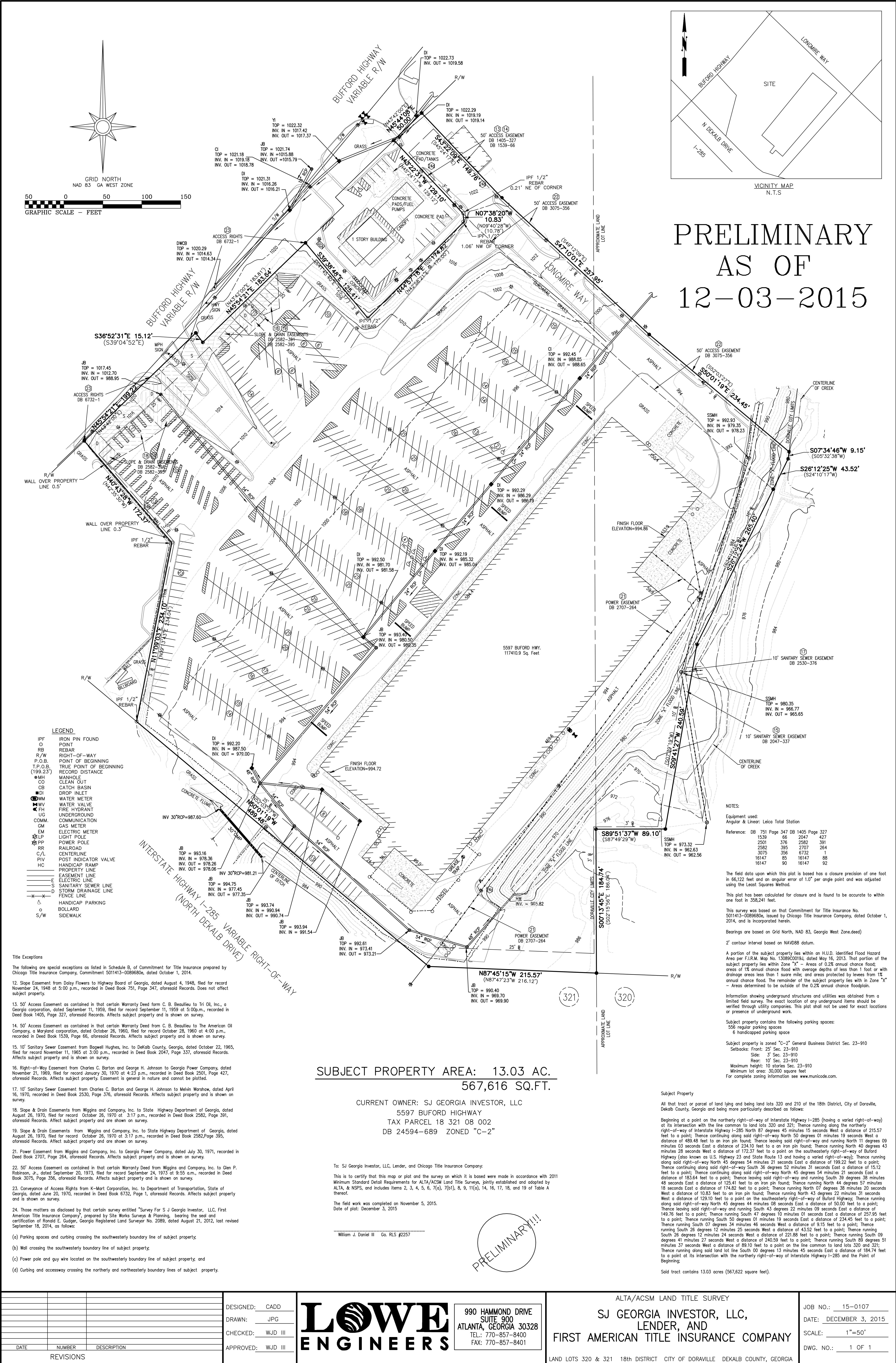
Legal Description and Site Survey

EXHIBIT A

Legal Description

All that tract or parcel of land lying and being in Land Lots 320 and 321 of the 18th District of DeKalb County, Georgia and being more particularly described as follows:

BEGINNING at a point located at the intersection of the eastern line of said Land lot 321 with the northern right-of-way of Interstate Highway 285; thence along said northern right-of-way of Interstate Highway 285 proceed North 89°47'23" West for 216.12' to a point; thence continuing along said right-of-way proceed North 52°03'27" West for 489.48' to a point; thence leaving said right-of-way proceed North 09°13'43" East for 234.04' to a point; thence proceed North 42°35'30" West for 172.37' to a point on the right-of-way of Buford Highway (having a variable right-of-way); thence along said right-of-way proceed North 43°42'00" East, 199.22' to a point; thence continuing along said right of way proceed South 39°04'52" East, 15.12' to a point; thence continuing along said right-of-way proceed North 43°42'00" East for 183.81' to a point at the westernmost corner of property now or formerly owned by American Oil Company; thence leaving the right-of-way of Buford Highway and along said American Oil Company property proceed South 41°45'40" East for 125.37' to a point; thence continuing along said American Oil Company property proceed North 42°58'21" East for 175.00' to a point; thence continuing along said American Oil Company property proceed North 09°40'28" West for 10.78' to a point; thence continuing along said American Oil Company property proceed North 45°24'17" West for 129.12' to a point on the right-of-way line of Buford Highway; thence leaving said American Oil Company property and along the right-of-way of said Buford Highway proceed North 43°42'00" East for 50.00' to a point; thence leaving said right-of-way proceed South 45°24'17" East for 149.76' to a 1/2 inch re-bar found; thence proceed South 49°12'09" East for 257.95' to a point; thence proceed South 52°03'27" East for 234.45' to a point; thence proceed South 05°32'38" West for 9.15' to a point; thence proceed South 24°10'17" West for 43.52' to a point; thence proceed South 24°10'16" West for 221.88' to a point; thence proceed South 07°39'19" West for 240.59' to a point; thence proceed South 87°49'29" West for 89.10' to a point on the eastern line of Land Lot 321 and the western line of Land Lot 320; thence proceed along said Land Lot Line South 02°15'56" East for 186.04' returning to the point of beginning. Said parcel contains 568,508 square feet or 13.0511 Acres, more or less, and is described on a survey prepared by Ronald E. Gudger, R.L.S. #2089, Gudger Surveying, Inc. for Buford Plaza, LLC and First American Title Insurance Company, dated May 13, 2004.



Appendix B

EPA Region IV Brownfields Grant Site Eligibility Determination Outline



**EPA R4 BROWNFIELDS GRANT
SITE ELIGIBILITY DETERMINATION OUTLINE**

To be used for determining site eligibility for Phase II Environmental Site Assessments and Cleanups.

A. GENERAL INFORMATION

1. Grantee/Applicant Name: **City of Doraville**

2. If Grant:

Grant Number: **BF-00D48116-0**

Grant Type (104(k) Assessment, 104(k) RLF): **104k Assessment**

3. Work to be conducted (Phase II Assessment, Phase III Assessment, Cleanup): **Phase II Assessment**

4. How much funding do you anticipate spending on the site?

\$30,000 - \$45,000 for Phase II ESA and/or funding to prepare Analysis of Brownfield Cleanup Alternatives (ABCA)

Please note that there are funding limitations for site-specific activities. For assessments, no more than \$200,000 per site, with the possibility of a waiver for up to \$350,000. For cleanups, no more than \$200,000 per site.

5. Date of proposed work: **Q4 2017 – Q1 2018**

6. Date of this document: **November 30, 2017**

B. BASIC SITE INFORMATION

1. Site Name: **Former K-Mart**

2. Site Address (and County): **5597 Buford Highway, Doraville, DeKalb County, GA 30340**

3. Who is the current owner of the site? **Southern Gas Partners, LLC**

4. Describe grantee's or applicants relationship with the owner, and the owner's role in the work

to be performed: **The City of Doraville has no direct relationship with the owner. The site falls within the City's grant focus area, and was identified as a key property in downtown Doraville. The owner signed an access agreement for the Phase I & II ESA. Due to the findings of the Phase I ESA and the schedule of the City and the owner, a Phase II ESA is proposed to eliminate or limit future impacts, verify that the site has been adequately characterized, and potentially transition the site into the State Brownfield Cleanup Program. Due to anticipated closing schedule, the Phase II ESA report shall be issued by January 1, 2018.**

5. Known or Suspected Contaminant(s) (check one):

- ☐ Hazardous Substances
- ☐ Mine Scarred Lands
- ☐ Controlled Substances
- ☒ Hazardous Substances Commingled with Petroleum
- ☐ Petroleum Only

6. Identify when and how the site became contaminated; describe previous known uses. If the land has been vacant for many years, why does the grantee think that it is contaminated?

The former on-site auto repair operations was conducted within the on-site K-Mart building from 1970 through the early 2010s. This facility supported a waste oil underground storage tank (UST) installed in 1970 and reportedly removed in 1990. Together with the likely off-site sources of contamination (including one adjacent gas station and two historic adjacent leaking UST sites), suggest potential for the current presence of soil, groundwater, and/or vapor encroachment. In addition, due to the age of the on-site building, a limited asbestos and lead-based paint survey will be completed.

7. Does the site meet the definition of a Brownfields Site? (Is the site "real property, the expansion, redevelopment or reuse of which is complicated by the presence or potential presence of hazardous substances, pollutants or contaminants"?)

☒ YES ☐ NO

C. SITES NOT ELIGIBLE FOR FUNDING BY STATUTE

The grantee must supply the following information to the best of their knowledge:

1. Is the facility listed (or proposed for listing) on the National Priorities List? ☐ YES ☒ NO

2. Is the facility subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued to or entered into by parties under CERCLA?

☐ YES ☒ NO

3. Is the facility subject to the jurisdiction, custody, or control of the US government. (Land held in trust by the US government for an Indian tribe is eligible.) ☐ YES ☒ NO

*Note: If the answer is YES to any of the above (C.1-3) the property is **not** eligible.*

D. SITES ONLY ELIGIBLE FOR FUNDING WITH A PROPERTY SPECIFIC DETERMINATION BY EPA:

Certain properties can only be approved with a Property Specific Determination by EPA. The grantee must provide answers to the following questions to the best of their knowledge:

1. Is the site/facility subject to a planned or ongoing CERCLA removal action? ☐ YES ☒ NO
2. Has the site/facility been the subject of a unilateral administrative order, court order, an administrative order on consent or judicial consent decree that has been issued to or entered into by the parties, or been issued a permit by the U.S. or an authorized state under the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act (RCRA)), the Federal Water Pollution Control Act (FWPCA), the Toxic Substances Control Act (TSCA), or the Safe Drinking Water Act (SWDA)? ☐ YES ☒ NO
3. Is the site/facility subject to corrective action orders under RCRA (sections 3004(u) or 3008(h)) and has there been a corrective action permit or order issued or modified to require corrective measures? ☐ YES ☒ NO
4. Is the site/facility a land disposal unit that has submitted a RCRA closure notification under subtitle C of RCRA and is subject to closure requirements specified in a closure plan or permit? ☐ YES ☒ NO
5. Has the site/facility had a release of polychlorinated biphenyls (PCBs) that is subject to remediation under TSCA? ☐ YES ☒ NO
6. Has the site/facility received funding for remediation from the leaking Underground Storage Tank (LUST) Trust Fund? ☐ YES ☒ NO

Note: If the answer is YES to any of the above (D. 1-6), a property specific determination is required. The grantee or TBA applicant must complete the remaining applicable portions of this outline and submit additional information, as outlined in Appendix A to this document.

E. HAZARDOUS SUBSTANCE/COMMINGLED CONTAMINATION SITES (for Petroleum only sites, skip to F.)

1. Does the grantee own the site? ☐ YES ☒ NO
2. Answer the following if the grantee *is the current site owner*. (If the grantee is not the current site owner, skip to 3) :
 - a. Is the owner a ☐ Unit of State or Local Government **or** ☐ Other

b. If the owner is a governmental unit, how was the property acquired?

- ☐ Tax Foreclosure ☐ Donation ☐ Eminent Domain ☐ Bought it outright
☐ Other (Explain):

Date acquired: _____

c. Do they have a defense to CERCLA liability? (see FY12 ARC Guidelines)

☐ YES – Involuntary Acquisition

Bankruptcy, tax delinquency, abandonment, or other similar circumstances.

☐ YES – Bona Fide Prospective Purchaser (BFPP)

Did the owner conduct Pre-purchase Inquiry (EPA All Appropriate Inquiry, ASTM standards, or other) prior to acquiring property?

☐ YES ☐ NO

Did the owner take reasonable steps with regards to the contamination at the site?

☐ YES ☐ NO

☐ YES – Contiguous Property Owner

☐ YES – Third Party or Innocent Land Owner

☐ YES – Indian Tribe

☐ NO

d. Are they liable at the site as an ☐ Operator, ☐ Arranger, **or** ☐ Transporter

OR ☐ None Applicable

e. Did all disposal of hazardous substances at the site occur before they acquired the property? ☐ YES ☐ NO

f. Did they cause or contribute to any release of hazardous substances at the site?

☐ YES ☐ NO

3. Answer the following if the grantee *is not the site owner*:

a. Is the grantee potentially liable at the site as an ☐ Operator, ☐ Arranger, ☐ Transporter **No**

b. Is the grantee affiliated with the site owner (familial, contractual, financial):

☐ YES ☒ NO

F. PETROLEUM ONLY CONTAMINATION SITES

Petroleum sites need a written site eligibility determination by the state or EPA.

1. If the state *has made* the petroleum eligibility determination, the grantee must provide EPA with the letter from the state.

2. If the state *was unable to make* the determination, EPA must make the determination

consistent with the Guidelines (note that EPA staff will need to refer to the most recent ARC Guidelines to conduct the petroleum determination). The grantee must provide information regarding the following:

a. Whether the site is of “relatively low risk” compared with other “petroleum-only” sites in the state. Two key questions for this determination follow:

1. Have Leaking Underground Storage Tank funds been expended at this site?

☐ YES ☒ NO

2. Have Federal Oil Pollution Act response funds been expended at this site?

☐ YES ☒ NO

b. Whether there is a viable responsible party at the site. Key questions for this determination follow:

1. Was the site last acquired through tax foreclosure, abandonment or equivalent government proceedings? ☐ YES ☒ NO

2. Has a responsible party been identified through:

a) a judgment rendered in a court of law or an administrative order that would require any party to assess, investigate, or cleanup the site; ☐ YES ☒ NO

or

b) a filed enforcement action brought by federal or state authorities that would require any party to assess, investigate, or cleanup the site; ☐ YES ☒ NO or

c) a citizen suit, contribution action or other third party claim against the current or immediate past owner, that would, if successful, require that party to assess, investigate, or clean up the site. ☐ YES ☒ NO;

Skip to “b.5” if the site was acquired through tax foreclosure, abandonment or equivalent government proceedings; if not, answer question b.3 and 5.4.

3. The current owner is: **Southern Gas Partners, LLC**

Has the current owner:

a) dispensed or disposed of petroleum or petroleum product at the site?

☐ YES ☒ NO

b) owned the property during the dispensing or disposal of petroleum product at the site? ☐ YES ☒ NO

e) exacerbated the contamination at the site? ☐ YES ☒ NO

d) taken reasonable steps with regard to contamination at the site,
☐ YES ☒ NO.

4. The immediate past owner is: **Buford Highway, LLC**

Has the immediate past owner:

a) dispensed or disposed of petroleum or petroleum product at the site? ☐

YES ☒ NO

- b) owned the property during the dispensing or disposal of petroleum product at the site? ☒ YES ☐ NO
- c) exacerbated the contamination at the site? ☐ YES ☒ NO
- d) taken reasonable steps with regard to contamination at the site, ☐ YES ☒ NO

5. Based on the above, for purposes of Brownfields funding, is there a responsible party? ☐ YES ☒ NO If "YES" go on to #6, if "NO" proceed directly to F.2.C.

6. If there is a responsible party, is that party viable (has adequate financial resources to pay for assessment of the site). ☐ YES ☐ NO If "NO", explain the basis for that conclusion:

If there is a viable responsible party, the petroleum site is ineligible. If there is no responsible party, or if there is a responsible party who is not viable, continue. NOTE: States may apply their own laws and regulations to make the petroleum site determination instead of the previous questions; if they do so, the grantee must submit their determination and rationale.

c. Whether the grantee is potentially liable for cleaning up the site. Key questions for this determination follow:

1. Has the grantee ever:

- a) dispensed or disposed of petroleum or petroleum product at the site, or owned the property during the dispensing or disposing of petroleum? ☐ YES ☒ NO
- b) exacerbated the contamination at the site? ☐ YES ☒ NO

d. Is the site subject to any order issued under Sec. 9003(h) of the Solid Waste Disposal Act? ☐ YES ☒ NO

G. ACCESS

Does grantee have access or an access agreement for this property? ☒ YES ☐ NO

H. SITE ELIGIBILITY DETERMINATION BY EPA PROJECT OFFICER

Please Note: If there are any questions on eligibility, OR if the grantee owns the site it wishes to work on, the P.O. should consult with the Regional Brownfields Coordinator, and as necessary EPA legal counsel.

Site ☒ is / ☐ is not eligible for site assessment activities using EPA Brownfields Funds

-- OR --

☐ Site is eligible but requires an EPA Property-Specific Determination, for which additional information was provided.

Derek Street
EPA Project Officer

12/1/2017
Date:

I. EPA NOTIFICATION TO APPLICANT OF SITE ELIGIBILITY

Date Sent : 12/1/2017

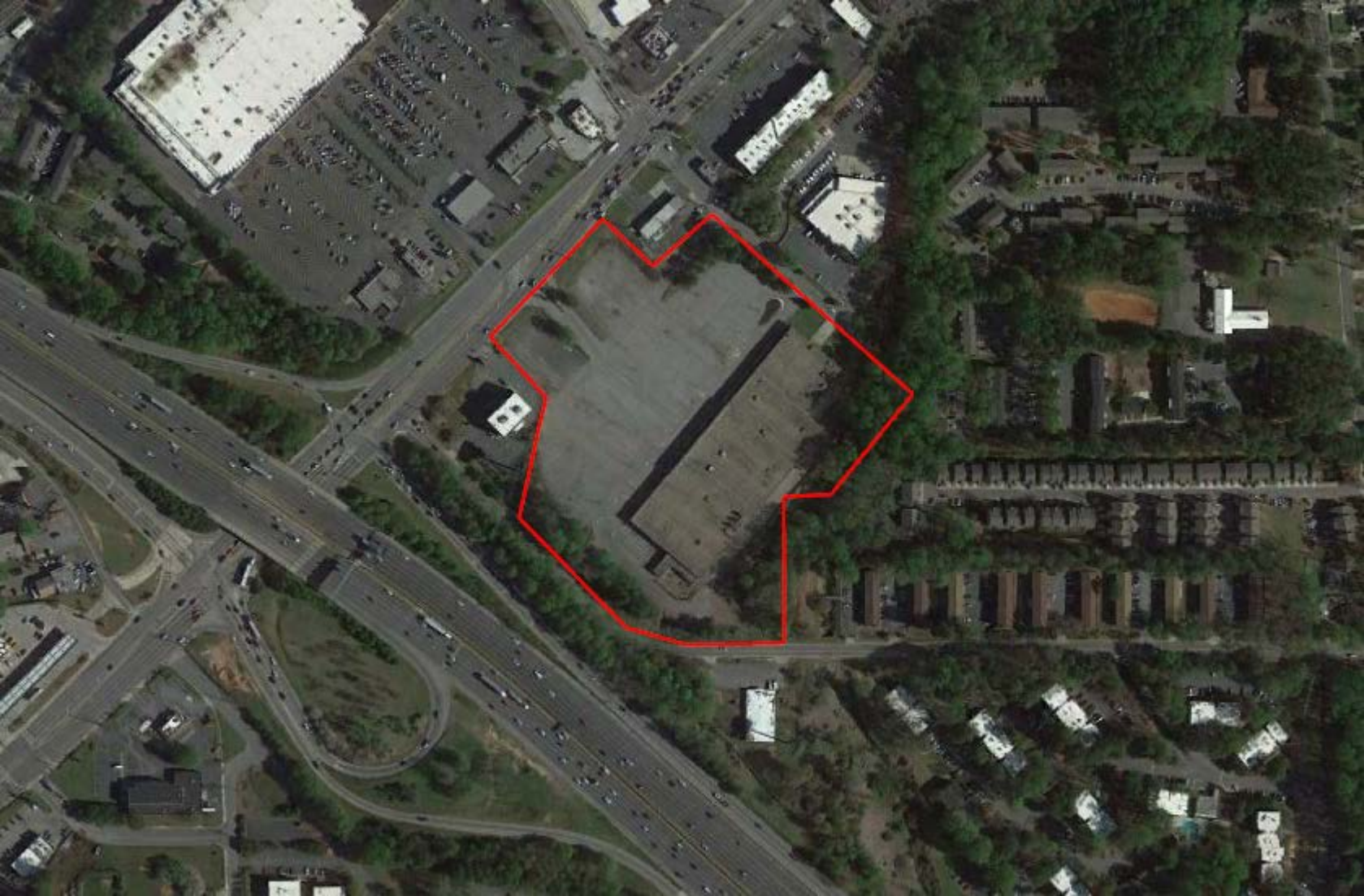
Copy of Notification Attached: ☐ YES ☐ NO

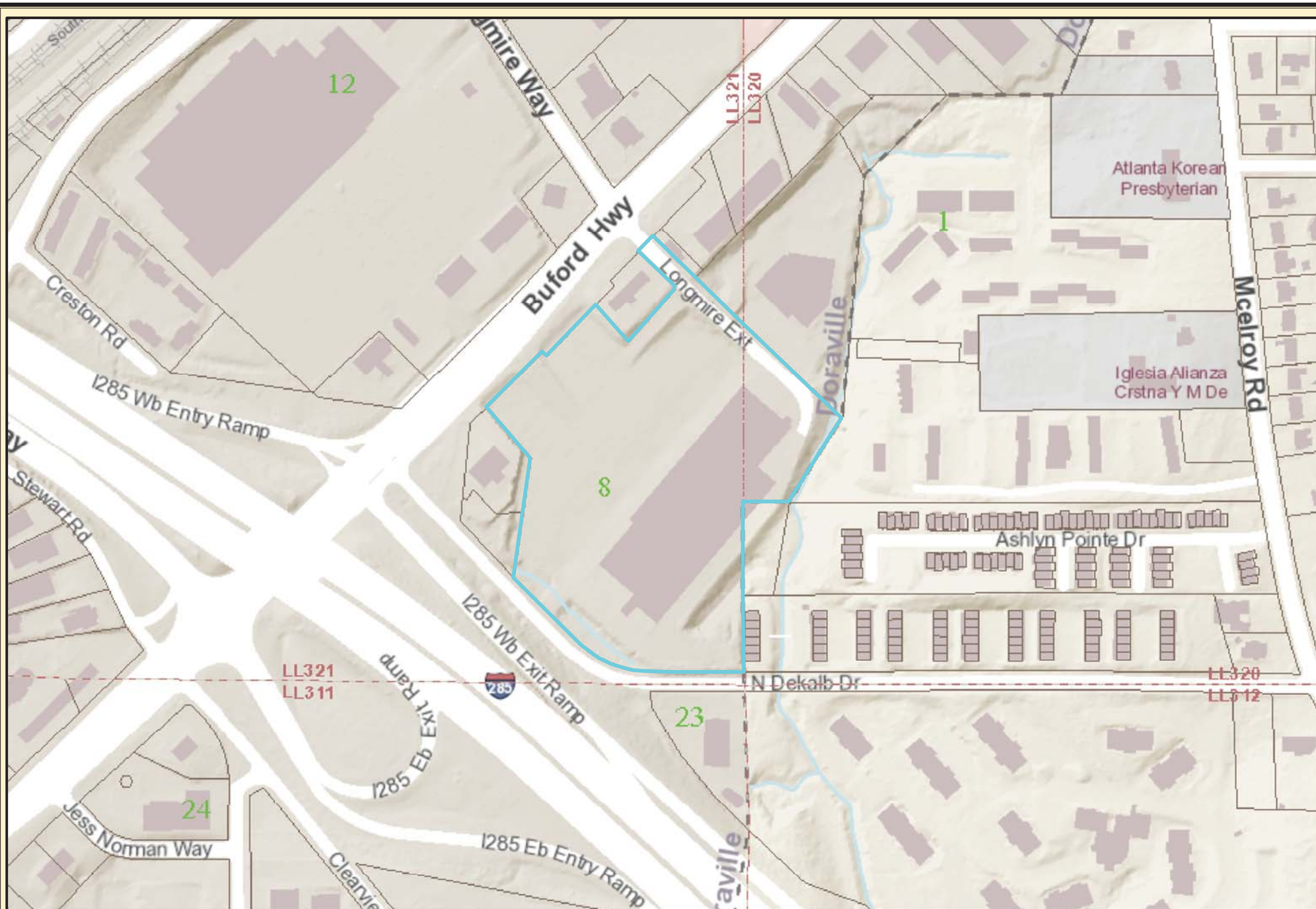
APPENDIX A: [IF REQUIRED] INFORMATION TO SUPPORT PROPERTY SPECIFIC DETERMINATION by EPA – **NOT APPLICABLE**

Grantee must explain why Brownfields financial assistance is needed and how it will protect human health and the environment and either promote economic development or enable the creation of, preservation of, or addition to parks, greenways undeveloped property, other recreational property, or other property used for nonprofit purposes.

Attachments:

1. Site Map
2. Tax Map





DeKalb County Parcel Map

0 87.5 175 350 525 700 Feet

Date Printed: 11/16/2017



DeKalb County GIS Disclaimer

The maps and data, contained on DeKalb County's Geographic Information System (GIS) are subject to constant change. While DeKalb County strives to provide accurate and up-to-date information, the information is provided "as is" without warranty, representation or guarantee of any kind as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. DeKalb County explicitly disclaims all representations and warranties, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. In no event shall DeKalb County be liable for any special, indirect, or consequential damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other actions, arising out of or in connection with the use of the maps and/or data herein provided. The maps and data are for illustration purposes only and should not be relied upon for any reason. The maps and data are not suitable for site-specific decision-making nor should it be construed or used as a legal description. The areas depicted by maps and data are approximate, and are not necessarily accurate to surveying or engineering standards.

Appendix C

Excerpts from Cardno's December 2017 Phase II ESA

Phase II Environmental Site Assessment

Former K-Mart

5597 Buford Highway
Doraville, DeKalb County, Georgia

December 2017

Prepared for:
City of Doraville Downtown Development Authority
EPA Cooperative Agreement BF-00D48116-0



Phase II Environmental Site Assessment

Prepared for: City of Doraville
Downtown Development Authority
3725 Park Avenue
Doraville, Georgia 30340
EPA Cooperative Agreement BF-00D48116-0



Project Name: **Phase II Environmental Site Assessment**
Former K-Mart
5597 Buford Highway
Doraville, DeKalb County, Georgia

Date: December 2017

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2	Soil Analytical Summary (Detections Only)
3	Groundwater Analytical Summary (Detections Only)
4	Groundwater Elevation Summary
5	Asbestos Sample Summary
6	EPA VISL Calculator

Appendices

A	Photographic Log
B	Soil Boring Logs
C	Laboratory Analytical Reports
D	Monitoring Well Construction Diagrams
E	Groundwater Sampling Logs
F	Asbestos Inspector and Lead-Based Paint Inspector Accreditations

Executive Summary

Cardno has completed a Phase II Environmental Site Assessment of the property identified as the former K-Mart located at 5597 Buford Highway, Doraville, DeKalb County, Georgia. The study property is herein referred to as "the subject site/property" or "the site" (as generally depicted in **Figures 1 and 2**) and consists of approximately 13 acres of land currently listed as owned by Southern Gas Partners, LLC.

The subject site is currently being evaluated for redevelopment. The subject site consists of approximately 13 acres of developed land, including an abandoned commercial shopping center building (approximately 117,000 square feet in area), with the remaining portion being utilized as a parking lot.

This assessment was performed to satisfy the requirements of the Client (City of Doraville and its Downtown Development Authority) and their assigns (including the prospective purchaser) with respect to potential environmental impairment and liabilities associated with the property due to contamination by hazardous substances, controlled substances or petroleum products on or near the site. This assessment was completed under the City of Doraville's Environmental Protection Agency (EPA) Assessment Grant. All Phase II ESA activities were conducted under the EPA approved Site Specific Quality Assurance Project Plan (SSQAPP) dated December 7, 2017.

This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) *Standard Practices for Environmental Site Assessments: Phase II ESA Process* (ASTM Designation: E1903-11). The purpose of this Phase II ESA was to evaluate the recognized environmental conditions (RECs) identified in the Phase I ESA, completed by Cardno in December 2017, for the purpose of providing sufficient information regarding the nature and extent of contamination (if present) in the shallow subsurface, to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA.

In order to address all the issues identified during the Phase I investigation, the Phase II investigation included the following Scope items:

- Advancement of seven borings for soil screening and sample collection for a variety of analysis. Specific analysis for each boring are dependent on the findings of the Phase I ESA, but include benzene, toluene, ethylbenzene, and xylenes (BTEX), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs), polycyclic biphenyls (PCBs), and lead.
- Installation of five groundwater monitor wells for collection of shallow groundwater samples for laboratory analysis for similar constituents as their corresponding borings.
- Collection of on-site water table elevation data from the groundwater monitor wells to determine relative potentiometric surface elevations and shallow groundwater flow direction.
- Performance of a limited asbestos survey and limited lead-based paint (LBP) survey, with the collection of up to seventy-five (75) building material samples to be analyzed for asbestos containing materials (ACMs) and up to ten (10) paint chip samples to be analyzed for LBP.

In summary,

- **Soil:** Comparison of the laboratory analytical results to the Georgia Environmental Protection Division (EPD) Notification Concentrations (NCs) for soil revealed:
 - **Lead:** Lead concentrations were identified in six of the seven soil samples selected and submitted for analysis. However, it should be noted that all concentrations detected were below the NCs.
 - **BTEX / VOCs:** BTEX concentrations were identified in only one sample, collected at boring B-3. Concentrations of ethylbenzene and total xylenes exceeded their respective NCs.
 - **SVOCs / PAHs:** PAH concentrations were identified in only one sample, collected at boring B-3. However, all concentrations were below their respective NCs.
- **Shallow Groundwater:** Comparison of the laboratory analytical results to Georgia EPD Media Target Concentrations (MTCs) for shallow groundwater samples collected from the installed monitoring wells revealed:
 - **BTEX / VOCs:** BTEX concentrations were identified in samples collected from monitoring wells FKM-01 and FKM-03. Only the benzene concentrations were present above its MTC in both monitoring wells FKM-01 and FKM-03.
 - **SVOCs / PAHs:** PAH concentrations were identified in samples collected from monitoring wells FKM-01 and FKM-02. Naphthalene was the only parameter detected at concentrations above its MTC in samples from monitoring wells FKM-01 and FKM-03.
- **Vapor:** Groundwater VOC analytical results were run through the EPA Vapor Intrusion Screening Level (VISL) Calculator. Benzene, ethylbenzene, naphthalene, and total xylenes exceeded their associated target risks at sample locations FKM-01 and FKM-03. Wells FKM-01 and FKM-03 are located approximately 275 feet and 300 feet (respectively) northwest of the on-site building. In addition, soil and groundwater sampling adjacent the building identified no contamination. Therefore, there is no indication of a current vapor intrusion issue in the on-site building. The potential for vapor impact associated with future development should be evaluated.
- **Asbestos:** Comparison of the laboratory analytical results to the Occupational Safety and Health Administration's (OSHA) for building materials containing >1% asbestos revealed:
 - Underlying black mastic under bottom layer of all floor tile, carpet, and ceramic tile throughout the building. This material is located throughout the entire building, and encompasses approximately 100,000 square feet.
 - Ceramic walling of K-Mart bathrooms. This material is located in the bathrooms, and encompasses approximately 300 square feet.
- **Lead-Based Paint:** Comparison of the laboratory analytical results to the Environmental Protection Agency (EPA) and Housing and Urban Development (HUD) for paint chips identified the following material as lead-based paint:
 - Yellow paint on concrete vehicle barriers. This material is located on multiple exterior vehicle barriers and encompasses approximately 250 square feet.

- **Universal Waste:** Numerous fluorescent light bulbs were noted throughout the interior of the building, most in poor or deteriorating condition. There is a potential for the ballasts within these fluorescent light bulbs to contain hazardous materials, such as PCBs or mercury, and could potentially be classified as hazardous waste. All fluorescent light bulbs should be properly disposed of in an appropriate landfill in accordance with local, state, and federal regulations.

Based on the results of the Phase II ESA, Cardno recommends:

- The dissolved-phase impacts identified at monitoring well FKM-01 adjacent to the former Exxon gas station (the benzene and naphthalene dissolved-phase impacts on the northwest portion of the subject site) appear to be associated with a previous release from the adjacent property. As this release has received a no further action (NFA) required determination from the Georgia EPD, this contamination does not warrant additional investigation at this time.
- The impacts identified at boring B-3 / monitoring well FKM-03 adjacent to the current BP gas station (the VOCs impacts in soil and benzene and naphthalene dissolved-phase impacts in groundwater on the north portion of the subject site) appear to be associated with the previous release from the adjacent property. As this release has received a NFA required determination from the Georgia EPD, this condition does not warrant additional investigation at this time.
- Based on the absence of contamination in adjacent soil and groundwater sampling locations and the distance from the known contamination in soil and groundwater, there are no vapor intrusion issues with regards to the on-site building. However, there is a potential for vapor intrusion issues with regards to future building development around the locations of monitoring wells FKM-01 and FKM-03. Prior to any future development around these locations, additional Vapor Encroachment Screening (VES) in accordance with ASMT 2600 to further assess the presence of Vapor Encroachment Conditions (VEC) is recommended.
- The identified asbestos containing material appears to be in good condition with no significant deterioration or damages. Therefore, the identified ACM has a low probability of disturbance during ordinary use. Prior to any renovation or demolition that may cause the ACM to become friable, the material should be removed or abated by a qualified asbestos abatement contractor. If the ACM is to be left in place, an Operation and Maintenance (O&M) plan should be implemented regarding the handling of the identified ACM.
- The identified LBP appeared to be overall intact and in fair condition with no significant deterioration or damages. As the building is not a child-occupied facility, the identified LBP can be left intact unless disturbed during renovation or demolition. If the LBP is to be disturbed during renovation or demolition, depending on the extent of the disturbance, the LBP can be encapsulated, enclosed, or abated. All activity that disturbs LBP should be conducted by a licensed LBP renovation, repair, or paint (RRP) firm or a qualified LBP abatement contractor.
- As with all transactions of this nature, Cardno suggests all parties associated with this property transaction discuss the findings of this investigation with an Environmental Attorney.

1 Introduction

1.1 Purpose

Cardno was retained by the Client to conduct this Phase II ESA of the property located at 5597 Buford Highway, Doraville, Georgia (**Figures 1 and 2**). This investigation was conducted in general conformance with the scope and limitations outlined by *ASTM Standard E 1903-11*; however, the specific scope of work was negotiated between the Client and Cardno to meet the objectives of the Client. The primary objectives were to evaluate the identified RECs (as defined in *ASTM Standard E1527-05*) and asbestos and lead-based paint to provide sufficient information regarding the nature and extent of contamination (if present) to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the Landowner Liability Protection provisions under CERCLA. RECs are defined by *ASTM Standard E1527-05* as: “the presence or likely presence of any hazardous substances or petroleum products on property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

This assessment was completed under the City of Doraville’s Environmental Protection Agency (EPA) Assessment Grant. All Phase II ESA activities were conducted under the EPA approved Site Specific Quality Assurance Project Plan (SSQAPP) dated December 7, 2017.

1.2 Site History / Previous Assessments

Based on the Phase I ESA completed for this property in December 2017, the site’s historical use included a shopping center which supported a former K-Mart with auto repair operations (1970 through the early 2010s). The site was undeveloped or developed with interspersed single-family residences prior to 1970. The site has been vacant since approximately the early 2010s.

Georgia Environmental Protection Division (EPD) documents reviewed as part of the Phase I ESA indicated that the subject site supported one 1,000-gallon underground storage tank (UST) for the storage of used oil in association with the auto repair operations. This UST was installed in 1970, and reportedly removed in 1990. No subsurface investigation was conducted in association with this removal. During the Phase I ESA site investigation, several in-ground hydraulic lifts were also noted in the interior of the building.

1.3 Current Adjacent Land Uses

Nearby commercial properties include light commercial and retail establishments and municipal buildings. The site is located in an area predominately occupied by commercial and residential land-uses. The following table summarizes the current adjacent land uses.

Direction from Property	Occupant(s) Name	Current Use
Northwest	Marshals / Buford Highway Farmer’s Market	Shopping Center
Northwest	Pep Boys Auto Repair	Auto Repair
Northwest	First Intercontinental Bank	Bank
Northwest	Zaxby’s Restaurant	Restaurant

Northwest	Waffle House Restaurant	Restaurant
Northwest	Shopping Center	Retail
Northwest	Vacant building	Retail
North	BP Gas Station	Gas Station
North	Shopping Center	Retail
North	Heaven Eye Care	Eye Doctor
North	United States Postal Service Facility	United States Postal Service
East	Apartments	Residential
South	Daycare facility	Retail
Southwest	Interstate 285	Transportation

1.4 Previous Environmental Assessment

A Phase I ESA was completed in December 2017 and the following RECs were identified:

- The subject site supported auto repair maintenance operations since its development in 1970 until its vacancy in the early 2010s. The facility utilized one 1,000-gallon steel underground storage tank (UST) for used oil which was installed in 1970 and removed from the ground in 1990. Maintenance activities and the former UST together have the potential to affect the subject site. There is potential for a release from these activities that may require additional investigation and management.
- Two up-gradient adjacent gas stations were identified as leaking underground storage tanks (LUSTs). Both gas stations began operations as early as the 1960s, with one (BP Foodmart) still in operation and the other (Exxon #45787) being closed in 1992. While both releases have achieved no further action (NFA) required determination with the Georgia Environmental Protection Division (EPD), there is still potential for the past releases or a new release from these properties to have impacted the subject site that may require additional investigation and management.
- An up-gradient adjacent auto repair facility (Big 10 Tires / Pep Boys) was identified since the 1980s. There is potential for a release from this property to have impacted the subject site that may require additional investigation and management.

Based on this Phase I ESA results, several non-scope issues were identified and documented and further testing activities and/or other actions are recommended at this time.

- The former K-Mart building was constructed prior to 1980 and contained several suspect asbestos containing materials (ACM). Suspect materials include floor tiles, wall board and joint compound, mastic, ceiling tiles, caulk, roof shingles, etc. Prior to the disturbance of these materials, it is recommended that they be tested and abated for any ACM.
- The former K-Mart building was constructed prior to 1972 and contains suspect lead-based paint (LBP) coated surfaces. Prior to the disturbance of these materials, it is recommended that this material be tested and abated as appropriate.

1.5 Limitations / Exceptions of Assessment

The conclusions and recommendations contained within this report are based on the data developed during this Phase II ESA investigation. This report was prepared for the Client and their assignee(s),

and is intended solely for their use. This report is not intended for third-party use without the expressed written consent of the Client and Cardno. This assessment has been prepared in general accordance with accepted environmental methodologies referred to in *ASTM Standard 1903-11*, including limitations inherent in these methodologies.

A limited asbestos and lead-based paint inspection was completed. Any suspect building materials not sampled and analyzed for asbestos during this investigation should be treated as presumed asbestos containing materials (PACM) until further sampling by a certified inspector indicates otherwise. Any suspect LBP not sampled and analyzed for lead during this investigation should be treated as LBP until further sampling by a certified inspector indicates otherwise.

No other warranty is expressed or implied.

1.6 Special Terms and Conditions (User Reliance)

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty. Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance or petroleum releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction. Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether the generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

This report is for the use and benefit of, and may be relied upon by the entity(s) identified in the Executive Summary of this report as the Client, as well as any of its affiliates and their respective successors and assigns, in connection with a commercial real estate transaction involving the property, and in accordance with the terms and conditions in place between Cardno and the Client for this project. Any third party agrees by accepting this report that any use or reliance on this report shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual site conditions may change with time, and that hidden conditions may exist at the property that were not discovered within the authorized scope of the assessment. Any use by or distribution of this report to third parties, without the express written consent of Cardno is at the sole risk and expense of such third party.

Cardno makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the

assembling of data and information related thereto. No other warranties are made to any third party, either expressed or implied.

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2 Phase II ESA Activities

2.1 Sampling Objectives

2.1.1 Conceptual Site Model and Sampling Plan

The conceptual site model (CSM) takes into consideration the potential distribution(s) of contaminants with respect to the property and anticipated fate and transport characteristics of contaminants in the setting being assessed. The sampling plan was designed to provide for both the collection of environmental media samples at locations and depths where impacts are most likely to occur.

The sampling plan developed for this project was based upon information provided in the December 2017 Phase I ESA that included the regulatory data related to the adjacent UST systems.

2.1.2 Chemical Testing Plan/QAQC

The chemical testing plan was designed to detect the contaminants suspected to be present in the samples collected. This testing plan included tests which provide quality assurance (QA) and techniques that provide quality control (QC) over the chemical analysis. A completed chain of custody record accompanied each sample shipment to the analytical laboratory. Chain of custody records provide written documentation regarding sample collection and handling, identify the persons involved in the chain of sample possession, and a written record of requested analytical parameters. In addition, trip blanks were included in all coolers containing samples for volatile organic compounds.

2.2 Field Investigation and Methods

2.2.1 Soil Boring Installations

Based on the results of the Phase I ESA, seven soil borings (B-1 through B-7) were installed as depicted on **Figure 3**. A similar sampling plan was provided in the site-specific Quality Assurance Project Plan (SSQAPP). Per the SSQAPP five of the borings were converted to monitoring wells. All boring and monitoring wells were advanced in strategic locations based on the on-site and off-site RECs identified in connection with the subject property. These borings were advanced into groundwater using a track-mounted Direct Push Technology (DPT) drill rig.

During advancement of the soil borings, DPT soil cores were logged for lithology and screened in-field with an Organic Vapor Analyzer (OVA) equipped with a Photoionization Detector (PID). A soil screening summary with OVA readings are included as **Table 1**. Soil boring logs are included in **Appendix B**. Equipment calibration documentation and other groundwater sampling documentation are included in **Appendix E**.

Boring B-1 was located on the west portion of the subject site, southeast of the First Intercontinental Bank. The purpose of this boring was to identify any possible off-site contamination originating from the former Exxon gas station originally located at the current location of the bank. This boring was advanced to a total depth of 22 feet bgs and terminated in saturated clay. No elevated OVA readings were noted throughout the soil column. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected immediately above the presumed water table at 20 feet bgs and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) via EPA Method 8260B, polynuclear aromatic hydrocarbons (PAHs) via EPA Method 8270D, and lead via EPA Method 6010D.

Boring B-2 was located on the northwest portion of the site, adjacent Buford Highway. The purpose of this boring was to identify any possible off-site contamination originating from the current and historic auto repair operations to the adjacent northwest across from Buford Highway. This boring was advanced to a total depth 20 feet bgs and terminated in saturated clay. A peak OVA reading of 11.2 parts per million (ppm) was identified at a depth between 5-10 feet bgs. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected at a depth of nine feet bgs and analyzed for volatile organic compounds (VOCs) via EPA Method 8260B, semi-volatile organic compounds (SVOCs) via EPA Method 8270D, and lead.

Boring B-3 was located on the north portion of the site, south of the adjacent BP gas station. The purpose of this boring was to identify any possible off-site contamination originating from the current gas station. This boring was advanced to a depth of 35 feet bgs and terminated in saturated clay. Elevated OVA readings were noted between the depths of 10-30 feet bgs, with a peak of 678 ppm between 20-25 bgs. A strong petroleum odor was identified between 20-25 feet bgs. A soil sample was collected from 23 feet bgs and analyzed for BTEX, PAHs, and lead.

Boring B-4 was located northeast of the on-site building and south of the adjacent US Post Office. The purpose of this boring was to help delineated groundwater flow, as well as to identify any possible contamination from the adjacent US Post Office and BP gas station. This boring was advanced to a depth of 25 feet bgs and terminated in saturated clay and partially weathered rock. No elevated OVA readings were noted throughout the soil column. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected from above the presumed groundwater elevation at a depth of 21 feet bgs and analyzed for BTEX, PAHs, and lead. A duplicate soil sample was collected from this location.

Boring B-5 was located southwest of the on-site building, on the south portion of the former auto repair facility. The purpose of this boring was to identify any possible contamination originating from the former on-site auto repair operations. This boring was advanced to a depth of 20 feet bgs and terminated in saturated clay and partially weathered rock. No elevated OVA readings were noted throughout the soil column. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected at nine feet bgs and analyzed for VOCs, SVOCs, lead, and polychlorinated biphenyls (PCBs, via EPA Method 8082A).

Boring B-6 was located southwest of the on-site building, on the north portion of the former auto repair facility. The purpose of this boring was to identify any possible contamination originating from the former on-site auto repair operations. This boring was advanced to a depth of 19.5 feet bgs and terminated upon augur refusal in partially weathered rock. No elevated OVA readings were noted throughout the soil column. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected at six feet bgs and analyzed for VOCs, SVOCs, lead, and PCBs.

Boring B-7 was located south of the on-site building, southeast the former garden center and south of the former auto repair facility. The purpose of this boring was to identify any possible contamination originating from the former on-site auto repair operations. This boring was advanced to a depth of 20 feet bgs and terminated in slightly saturated sand. No elevated OVA readings were noted throughout the soil column. No odors or visual evidence of contamination were noted in any of the recovered materials. A soil sample was collected at 13 feet bgs and analyzed for VOCs, SVOCs, lead, and PCBs.

A total of seven soil samples and one duplicate was collected from the soil borings and submitted to Analytical Environmental Services, Inc. (AES) in Atlanta, Georgia under Chain-of-Custody protocol.

2.2.2 Groundwater Sampling Activities

Five of the soil borings (borings B-1 through B-5) were extended into the water table and converted into permanent groundwater monitor wells (FKM-01 through FKM-05) as depicted on **Figure 4**. After the DPT boring and soil sampling were completed at each well location, hollow stem augers (HAS) were utilized to over-drill the DPT boring. Permanent, 2-inch diameter, polyvinyl chloride (PVC) monitoring wells were installed in 10-foot section through the interior of the augers. The well screens were 0.010-inch manufactured slot PVC, and screen lengths for each well were 15 feet. Silica sand pack was installed to a depth of two feet above each well screen, followed by approximately two feet of bentonite. Above the bentonite, the wells were grouted to the ground surface. Each monitoring well was finished using a traffic-rated, flush-mount vault within a two-foot by two-foot concrete pad. The wells were completed with padlocked expanding caps. Monitoring well construction details are provided in well construction diagrams in **Appendix D**.

After their installation, the monitoring wells were developed using a high flow submersible pump until at least five well volumes were removed. Suspended fines and foreign materials from the initial soil borings were purged during development with the goal of encouraging formation groundwater to enter the well screen.

Prior to sampling, the wells were purged with a Mega Monsoon low flow pump either a minimum of three well volumes or until the groundwater quality parameters were stabilized. Groundwater quality parameters measured include pH, temperature, conductivity, and dissolved oxygen, which were measured using an In-Situ smarTROLL. Turbidity was measured utilizing a turbidimeter, with the parameter that groundwater have a turbidity of less than 10 Neptholometric Turbidity Units (NTU). The In-Situ smarTROLL readings and other groundwater sampling documentation are included in **Appendix E**.

Monitoring Well FKM-01 was installed at the location of B-1 and was purged until all groundwater parameters were stabilized. A groundwater sample was collected on December 18, 2017 and analyzed for BTEX and PAHs. A duplicate groundwater sample was collected from this location.

Monitoring Well FKM-02 was installed at the location of B-2. On December 18, 2017, it was determined that well casing had been damaged and sand had filtered into the well and groundwater could not be collected. This well was reinstalled on December 18, 2017 to a depth of 29 feet bgs and developed a minimum of five well volumes. On December 19, 2017, FKM-02 was purged until all groundwater parameters were stabilized. A groundwater sample was then collected and analyzed for VOCs and SVOCs.

Monitoring Well FKM-03 was installed at the location of B-3 and was purged until all groundwater parameters were stabilized. A groundwater sample was collected on December 18, 2017 and analyzed for BTEX and PAHs. A matrix spike / matrix spike duplicate (MS/MSD) groundwater sample was collected from this location.

Monitoring Well FKM-04 was installed at the location of B-4 and was purged until all groundwater parameters were stabilized. A groundwater sample was collected on December 18, 2017 and analyzed for BTEX and PAHs.

Monitoring Well FKM-05. FKM-05 was installed at the location of B-5. This well was initially purged approximately one well volume; however, due to plastic shavings interfering with the Mega Monsoon low flow pump, this well had to be purged utilizing a disposable PVC 1.6-inch bailer. After three well volumes were purged, a groundwater sample was collected on December 18, 2017 and analyzed for VOCs, SVOCs, and PCBs.

A total of five groundwater samples, one duplicate, and MS/MSD were collected from the monitoring wells and submitted to AES in Atlanta, Georgia under chain-of-custody protocol.

2.2.3 Groundwater Elevation Data Collection

To assist in determining the direction of groundwater flow within the boundaries of the subject site, elevation data was collected from the new monitoring wells. Elevations were recorded relative to an arbitrary datum to assist in the evaluation of shallow groundwater flow direction.

Depth-to-groundwater measurements were taken from top of casing. Upon completion of sampling activities, the monitoring wells were surveyed by Cardno environmental field technicians. The data is present in **Table 4**.

2.2.4 Quality Assurance and Quality Control Methods

Field procedures and protocols used during this Phase II ESA were performed in general accordance with those prescribed by the EPA Region IV Science and Ecosystems Support Division (SESD) guideline documents referenced in the SSQAPP.

As discussed in the SSQAPP, one duplicate soil and groundwater sample, one MS/MSD groundwater sample pair, one field blank, and one equipment rinsate blank sample were collected in the field. MS/MSD samples are a form of laboratory quality assurance/quality control (QA/QC) for determining matrix effects and the reliability of the analytical processes and equipment. Additionally, a trip blank for each sample shipment was provided by the laboratory. The quality controls were submitted for laboratory analysis of the project constituent suite.

Samples were labeled with a distinct sample identification number, the sampler's initials, and the date of the collection. Each sample container was properly sealed, labeled, and placed on ice in a cooler for deliver to the accredited laboratory (AES) within the sample hold times. A properly completed chain-of-custody form was initiated in the field and accompanied the samples when submitted to the laboratory for analyses. Copies of the chain-of-custody forms are shown in the laboratory analytical reports included as **Appendix C**.

2.2.5 Limited Asbestos Survey

A limited asbestos inspection was conducted on December 15 and 18-19, 2017. The inspection was performed by Cardno's Douglas Strait, P.E., a Georgia licensed and accredited asbestos inspector, in accordance with the Asbestos Hazardous Emergency Response Act (AHERA) and Asbestos School Hazard Abatement Reauthorization Act (ASHARA). Mr. Strait's accreditation certificate is included as **Appendix F**. During the inspection, Mr. Strait was provided assistance by Cardno's Keith Ziobron, Branch Manager. No previous asbestos sampling information was provided by the client or the property owner.

In accordance with National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61-Subpart M, paragraph 145, all asbestos containing materials (ACMs) must be identified and removed prior to disturbance, either during a renovation or demolition. ACM is defined by OSHA as materials that contain greater than 1% asbestos fibers.

The ACM inspection included a visual inspection of all accessible interior and exterior areas of the on-site building. The roof and areas not easily accessed through the use of a 6-foot stepladder were assessed during this inspection. In addition, due to uncertainty of the structural integrity, the second floor of the interior was not inspected. Non-destructive testing was performed to verify the existence

and extent of ACM in all building materials. This inspection was performed in accordance with AHERA and ASHARA protocols.

All suspect materials, or homogeneous areas (HAs) were visually identified. Each HA was visually assess for condition, friability, and quantity. A summary of all bulk samples collected is included as **Table 5**.

During the inspection, Cardno collected fifty-three (53) samples from twenty-three (23) HAs. All bulk samples were collected and stored in appropriate sample containers, labeled, and delivered to AES in Atlanta, Georgia. AES analyzed the samples using Polarized Light Microscopy (PLM) via EPA Method 600/R-93/116. This laboratory is accredited by the National Institute of Standards of Technology (NIST), and is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP). A copy of the analytical results including the laboratory certification is included in **Attachment B**.

2.2.6 Limited Lead-Based Paint Inspection

A limited lead-based paint (LBP) inspection was conducted on December 15 and 18-19, 2017 by Cardno's Douglas Strait, a Georgia and EPA-accredited LBP inspector. All testing was completed in accordance with applicable HUD, state, and federal regulations regarding LBP inspections. Mr. Strait's pertinent training and licensing certificates are included as **Appendix F**. Mr. Strait was provided assistance by Cardno's Keith Ziobron, Branch Manager. No previous LBP sampling information was provided by the client or the property owner.

The LBP testing was performed in accordance with the inspection protocol in Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. Painted surfaces were testing by collected paint chips of various painted surfaces throughout the interior and exterior of the building. LBP is defined by EPA as containing greater than 0.5% lead in painted materials.

During the inspection, Cardno collected six (6) paint chips samples from unique locations throughout the interior and exterior of the on-site building. The following table summarizes the samples inspected:

Sample ID	Location	Substrate	Color	Condition
LBP-1	Interior, stairwell, northeast wall	Concrete	White	Fair, minor deterioration
LBP-2	Interior, kitchen area on northeast portion of building	Metal	Grey	Intact
LBP-3	Exterior, parking lot	Concrete	Yellow	Mostly intact, some minor deterioration
LBP-4	Exterior wall, front of building	Concrete	White	Intact
LBP-5	Exterior wall, back of building	Concrete	White	Intact
LBP-6	Interior, former auto repair, ceiling	Metal	White	Poor, significant deterioration

The roof and areas inaccessible by a 6-foot stepladder were not inspected during this assessment. In addition, due to uncertainty of the structural integrity, the second floor of the interior was not inspected.

All paint chip samples were collected into appropriate containers, labeled, and delivered to AES in Atlanta, Georgia. The laboratory analyzed the samples using flame atomic absorption spectrometry (FAAS) via National Institute for Occupational Safety and Health (NIOSH) Method 7082. This laboratory is accredited by the NIST program, and is recognized under the NVLAP. A copy of the analytical results included the laboratory certification is included in **Appendix C**.

3 Environmental Assessment Results

3.1 Analytical Data Results

3.1.1 Soil

Samples collected from soil borings B-3 (located south of the adjacent BP gas station) exhibited the highest OVA readings indicating petroleum-impacted soils. A soil screening summary with all OVA readings are provided in **Table 1**.

A comparison of the laboratory analytical results of the collected soil samples to the Georgia EPD NCs for samples that exhibited detections above the laboratory method detection limits is presented in **Table 2** with locations depicted in **Figure 3**. In summary:

- **Metals:** Lead concentrations was detected majority of soil samples analyzed with the exception of boring B-4. None of the lead concentrations were detected above its corresponding NC.
- **VOCs:** Ethylbenzene, toluene, and total xylenes were identified in Boring B-3. Ethylbenzene had a concentration of 37,000 micrograms per kilogram (ug/Kg), which exceeds its NC of 20,000 ug/Kg. Total xylenes had a concentration of 170,000 ug/Kg, which exceeds its NC of 20,000 ug/Kg. Toluene did not exceed its NC at B-3. No other VOCs were identified in B-3 or any other soil samples analyzed.
- **SVOCs / PAHs:** Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were identified in Boring B-3. None of the contaminants exceeded their respective NCs. No other PAHs were identified in B-3 or any other soil sample analyzed.

3.1.2 Shallow Groundwater

A comparison of the laboratory analytical results of the collected groundwater samples to the Georgia EPD MCTs or samples that exhibited detections above the laboratory method detection limits is presented in **Table 3** with locations depicted on **Figure 4**. In summary:

- **VOCs:** Benzene, toluene, ethylbenzene, and total xylenes were identified in monitoring wells FKM-01 and FKM-03. Only benzene exceeded its MTC of 5 micrograms per liter (ug/L) with a concentration of 19 ug/L at FKM-01 and a concentration of 26 ug/L at FKM-03. No other VOCs in FKM-01 or FKM-03 exceeded their respective MTCs. No other VOCs were identified in any of the remaining groundwater samples analyzed.
- **SVOCs / PAHs:** Naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and pyrene were identified in monitoring wells FKM-01 and FKM-03. Only naphthalene exceeded its MTC of 20 ug/L with a concentration of 130 ug/L at FKM-01 and a concentration of 40 ug/L at FKM-03. No other SVOCs or PAHs at FKM-01 or FKM-03 exceeded their respective MTCs. No other SVOCs or PAHs were identified in any of the remaining groundwater samples analyzed.

3.1.3 Vapor Intrusion

Groundwater VOC analytical results were run through the EPA Vapor Intrusion Screen Level (VISL) Calculator. This site-specific calculator helps determine whether constituents found in groundwater samples pose a significant risk for vapor intrusion into the subject site building and any future building development. The detected VOCs results were entered into the calculator under a commercial exposure scenario assuming an average groundwater temperature of 23 °C. The vapor intrusion risks

for the detected VOCs generated by the calculator were compared against their Georgia EPD approved target screening levels (1.00E-5 for carcinogens, 1 for non-carcinogens).

3.1.4 Laboratory Analyses Quality Control (QC) Observations and Interpretations

No significant QA/QC issues were encountered by the laboratory. All samples were received in good condition, with all spikes and surrogates were recovered within established limits; and all method-specified holding times were met. Minor exceptions noted on select quality control batch samples were primarily attributed to matrix interference and did not affect data quality or usability. Laboratory Analytical Reports are included as **Appendix C**.

3.1.5 Shallow Groundwater Flow Direction

A comparison of shallow water table elevation data collected on December 19, 2017 (see **Table 4**) to an arbitrary benchmark indicated a shallow groundwater gradient flowing from the northeast portion of the site towards the southwest portion (as shown on **Figure 7**).

3.1.6 Asbestos-Containing Materials

Based on the analytical results of suspect ACM samples conducted during this limited inspection, the following materials were identified as asbestos-containing:

- Underlying black mastic attached to various 12"x12" flooring tile, carpet mastic, and ceramic tiles located throughout the subject site.
- Ceramic wall tiles attached to the walls of the bathroom located in the former K-Mart.

The black mastic under all the 12"x12" floor tiles, carpet mastic, and ceramic tiles were noted throughout the entire property. This material appears to be in good condition, and totals the majority of the flooring of the former retail space, approximately 100,000 square feet. The underlying mastic is considered a non-friable miscellaneous Category I material.

The ceramic wall tiles were noted in the bathrooms of the former K-Mart. This material appears to be in good condition, and is located on various walls in approximately three bathrooms, encompassing approximately 300 square feet. Photos of all identified ACMs are included as **Attachment A**.

The following building materials were identified as containing asbestos fibers, but less than 1% and therefore are not considered ACM:

- Drywall / joint compound walling located throughout the former K-Mart.
- Drywall / joint compound ceiling located throughout the former K-Mart.

As this material is not considered ACM, no further action is required. However, it should be noted that when handling any concentration of asbestos, certain precautions and safety measures should be followed in accordance with OSHA asbestos construction standards (29 CFR 1926.1101).

All sampling locations and material locations are included in the site diagram as **Figure 6**. The laboratory report is included as **Attachment C** with results summarized in **Table 5**.

3.1.7 Lead-Based Paint

In accordance with EPA, any paint containing 0.5% by weight of lead is categorized as containing lead. Based on the paint chip sampling results, the following painted surface tested positive for lead-based paint:

- Yellow paint on exterior concrete pole vehicle barricades.

The yellow paint was observed on several concrete pole vehicle barricades around the on-site building. While minor areas of the paint appeared to be peeling, majority was intact and in good condition totaling approximately 250 square feet.

All sampling locations and material locations are included in the site diagrams and are included as **Figure 6**. The laboratory report is included as **Appendix C**.

3.1.8 Universal Waste

Numerous fluorescent light bulbs were noted throughout the interior of the building, most in poor or deteriorating condition. There is a potential for the ballasts within these fluorescent light bulbs to contain hazardous materials, such as PCBs or mercury, and could potentially be classified as hazardous waste. All fluorescent light bulbs should be properly disposed of in an appropriate landfill in accordance with local, state, and federal regulations. Photographs of the light bulbs and ballasts are included in **Appendix A**.

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4 Discussion of Findings and Conclusions

4.1 Recognized Environmental Conditions

Based on the results of this assessment, the recognized environmental conditions and non-scope considerations discussed in the Phase I ESA appear to have been evaluated. No additional RECs were encountered during this investigation.

4.2 Affected Media

4.2.1 Soil

- **Ethylbenzene and total xylenes at Boring B-3:** As this location is not attributable to any possible on-site sources, the relatively-low exceedances of the NCs for ethylbenzene and total xylenes can be considered residual impacts from the off-site historic release associated with the BP gas station. This off-site historic release has received a no further action (NFA) determination from the Georgia EPD.

4.2.2 Groundwater

- **Benzene and Naphthalene at FKM-01:** As this location is not attributable to any possible on-site sources, the relatively-low exceedances of the MTCs for benzene and naphthalene can be considered residual impacts from the off-site historic release associated with the former Exxon gas station. This off-site historic release has received a NFA determination from the Georgia EPD.
- **Benzene and Naphthalene at FKM-03:** As this location is not attributable to any possible on-site sources, the relatively-low exceedances of the MTCs for benzene and naphthalene can be considered residual impacts from the off-site historic release associated with the BP gas station. This off-site historic release has received a NFA determination from the Georgia EPD.

4.2.3 Asbestos

The black mastic underlying all vinyl floor tile, ceramic tile, and carpet was identified as an asbestos containing material. This material is in good condition and encompasses approximately 100,000 square feet of the building interior flooring.

The ceramic wall tile was identified as an asbestos containing material. This material is in good condition and encompasses approximately 300 square feet of various bathroom walls.

4.2.4 Lead-Based Paint

The yellow paint on the concrete vehicle barrier poles contained lead-based paint. This material overall is intact in fair condition, with some areas of deterioration. This paint encompasses approximately 250 square feet, and is located in various locations throughout the exterior parking lot.

4.2.5 Universal Waste

All fluorescent light bulbs should be properly disposed of in an appropriate landfill in accordance with local, state, and federal regulations.

4.3 Vapor Intrusion Screening Calculator Results

Groundwater VOC analytical results were run through the EPA Vapor Intrusion Screening Level (VISL) Calculator. Benzene, ethylbenzene, naphthalene, and total xylenes exceeded their associated target risks. However, well locations FKM-01 and FKM-03, where the highest concentrations of VOCs were detected, were located approximately 275 feet and 300 feet (respectively) northwest of the on-site building. In addition, soil and groundwater sampling adjacent the building identified no contamination, which indicates there is no current vapor intrusion issues in the on-site building. Results of the EPA VISL Calculator are summarized in **Table 6**.

4.4 Evaluation of Data Quality

The data gathered during this assessment has been deemed acceptable from a quality assurance perspective (see Section 4.2.3) and is sufficient to determine whether hazardous substances or petroleum products related to the RECs identified in the Phase I ESA have impacted the subject site.

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5 Recommendations

Based on the results of this Phase II ESA:

- The dissolved-phase impacts identified at monitoring well FKM-01 adjacent the former Exxon gas station (the benzene and naphthalene dissolved-phase impacts on the northwest portion of the subject site) appear to be associated with the previous release from the adjacent property. As this release has received a no further action (NFA) required determination from the Georgia EPD, this contamination does not warrant additional investigation at this time.
- The impacts identified at boring B-3 / monitoring well FKM-03 adjacent the current BP gas station (the VOCs impacts in soil and benzene and naphthalene dissolved-phase impacts in groundwater on the north portion of the subject site) appear to be associated with the previous release from the adjacent property. As this release has received a NFA required determination from the Georgia EPD, this condition does not warrant additional investigation at this time.
- Based on the absence of contamination in adjacent soil and groundwater sampling locations and the distance from the known contamination in soil and groundwater, there are no vapor intrusion issues with regards to the on-site building. However, there is a potential for vapor intrusions issues with regards to future building development around the locations of monitoring wells FKM-01 and FKM-03. Prior to any future development around these locations, additional Vapor Encroachment Screening (VES) in accordance with ASMT 2600 to further assess the presence of Vapor Encroachment Conditions (VEC) is recommended.
- The identified asbestos containing material appears to be in good condition with no significant deterioration or damages. Therefore, the identified ACM has a low probability of disturbance during ordinary use. Prior to any renovation or demolition that may cause the ACM to become friable, the material should be removed or abated by a qualified asbestos abatement contractor. If the ACM is to be left in place, an Operation and Maintenance (O&M) plan should be implemented regarding the handling of the identified ACM.
- The identified LBP appeared to be overall intact and in fair condition with no significant deterioration or damages. As the building is not a child-occupied facility, the identified LBP can be left intact unless disturbed during renovation or demolition. If the LBP is to be disturbed during renovation or demolition, depending on the extent of the disturbance, the LBP can be encapsulated, enclosed, or abated. All activity that disturbs LBP should be conducted by a licensed LBP renovation, repair, or paint (RRP) firm or a qualified LBP abatement contractor.
- As with all transactions of this nature, Cardno suggests all parties associated with this property transaction discuss the findings of this investigation with an Environmental Attorney.

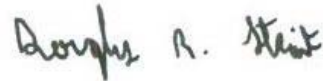
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6 Qualifications/Signatures of Environmental Professional(s)

Prepared by:

I declare that I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10 and that I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I further certify that in my professional judgment, this report meets the general requirements of *ASTM Method E 1903-11, Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

for Cardno



Doug Strait, PE
Project Manager

Date: 12/28/2017

QA/QC by:

I declare that I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10 and that I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I further certify that in my professional judgment, this report meets the general requirements of *ASTM Method E 1903-11, Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

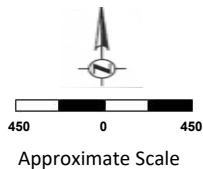
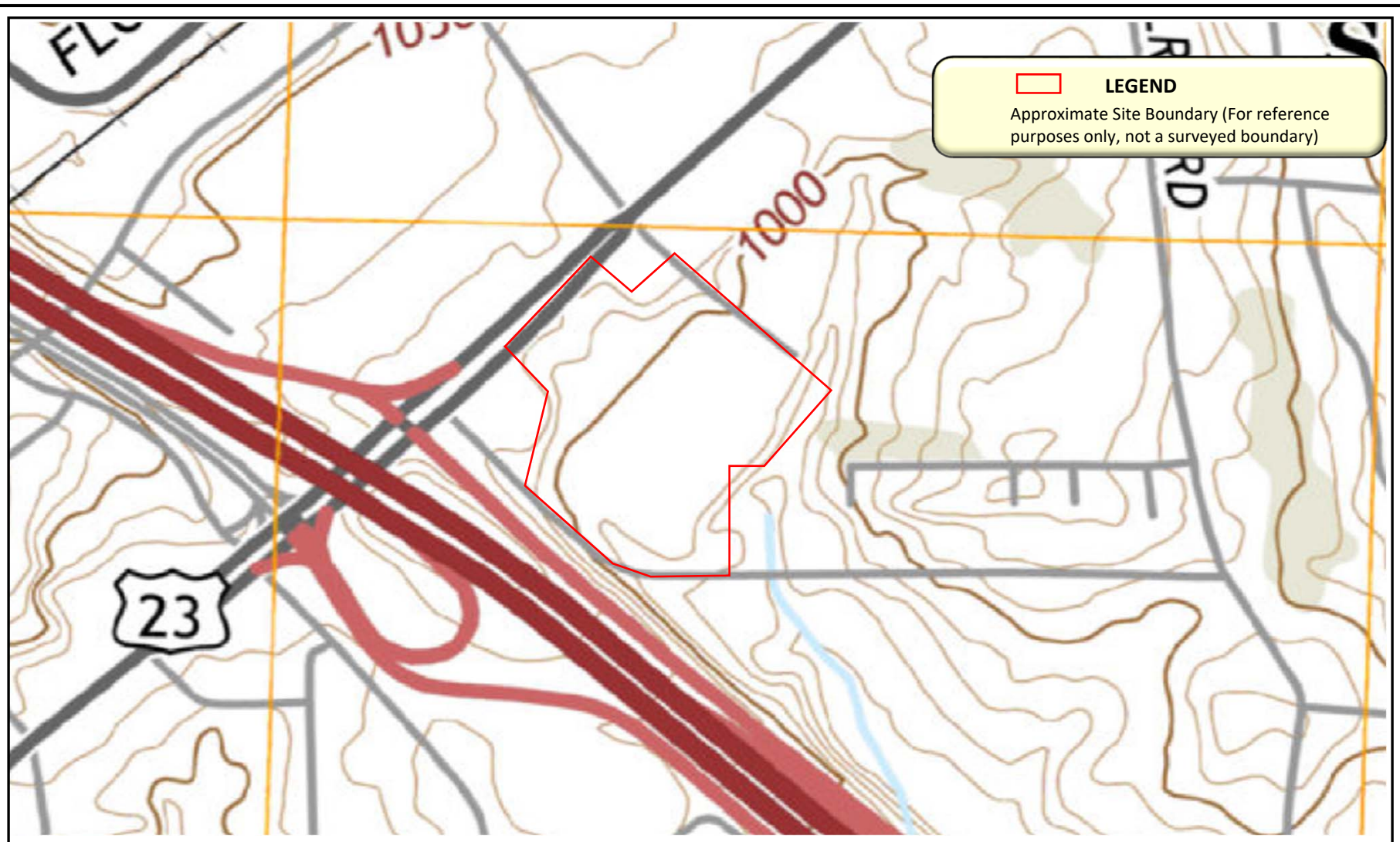
for Cardno



Keith Ziobron, PE
Branch Manager

Date: 12/28/2017

Figures



Phase II ESA
Former K-Mart, 5597 Buford Highway
Doraville, DeKalb County, Georgia
City of Doraville Downtown Development Authority
Cardno Project: 0002404000

Figure 1
USGS/Site Vicinity Map
Source: USGS 2014



LEGEND

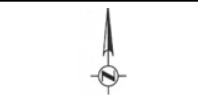
Approximate Site Boundary (For reference purposes only, not a surveyed boundary)



Source: Google Earth



"This is not a map of survey."



Approximate Scale

Phase II ESA

Former K-Mart, 5597 Buford Highway

Doraville, DeKalb County, Georgia

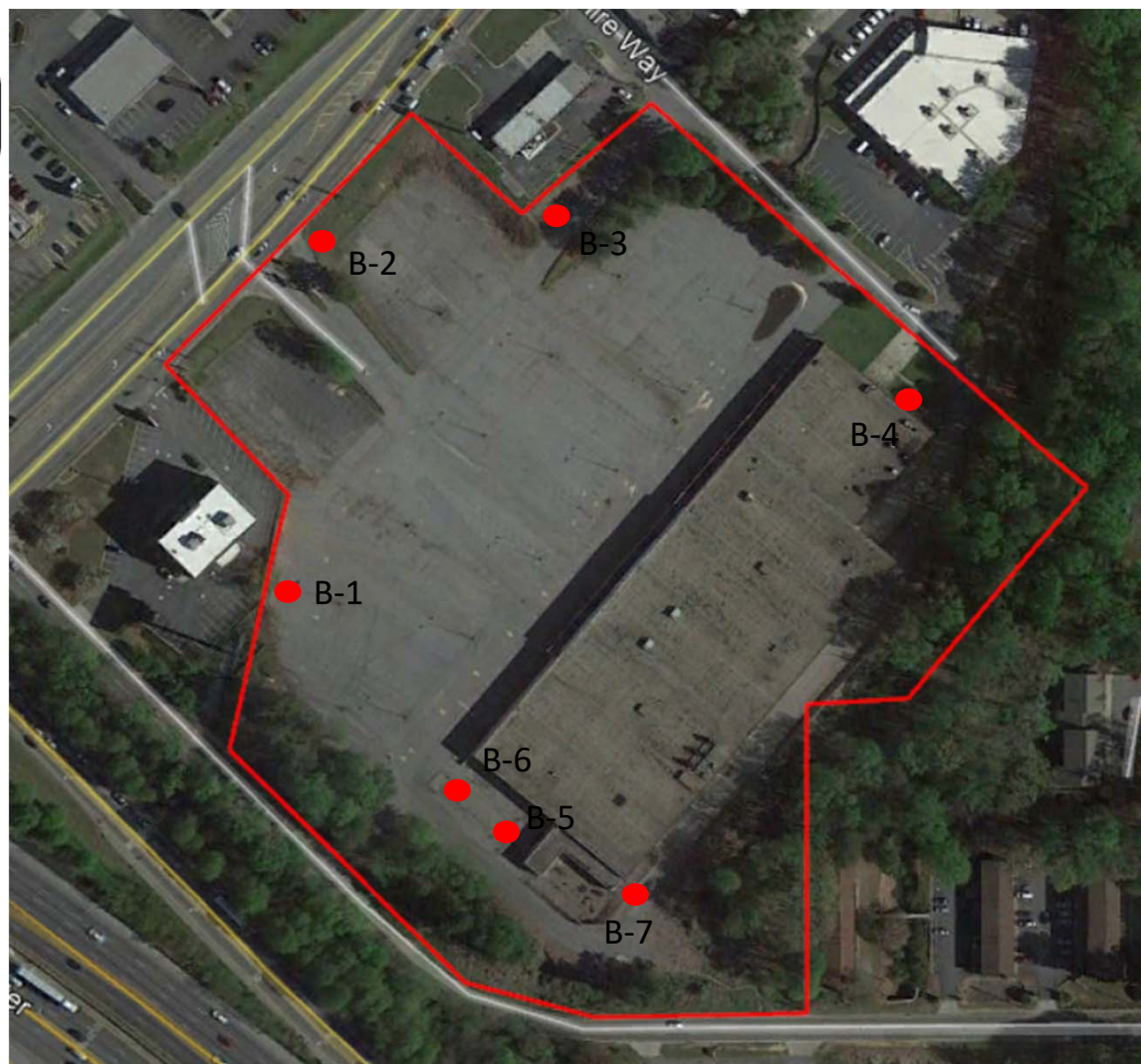
City of Doraville Downtown Development Authority Department

Cardno Project: 0002404000

Figure 2
Site Boundary Map

LEGEND

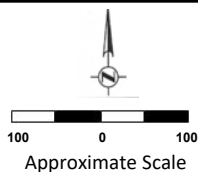
● Boring Location



Source: Google Earth



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Approximate Scale

Phase II ESA
Former K-Mart, 5597 Buford Highway
Doraville, DeKalb County, Georgia
City of Doraville Downtown Development Authority Department
Cardno Project: 0002404000

Figure 3
Soil Boring Location Map

LEGEND

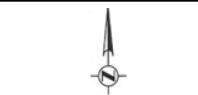
Monitoring Well Location



Source: Google Earth



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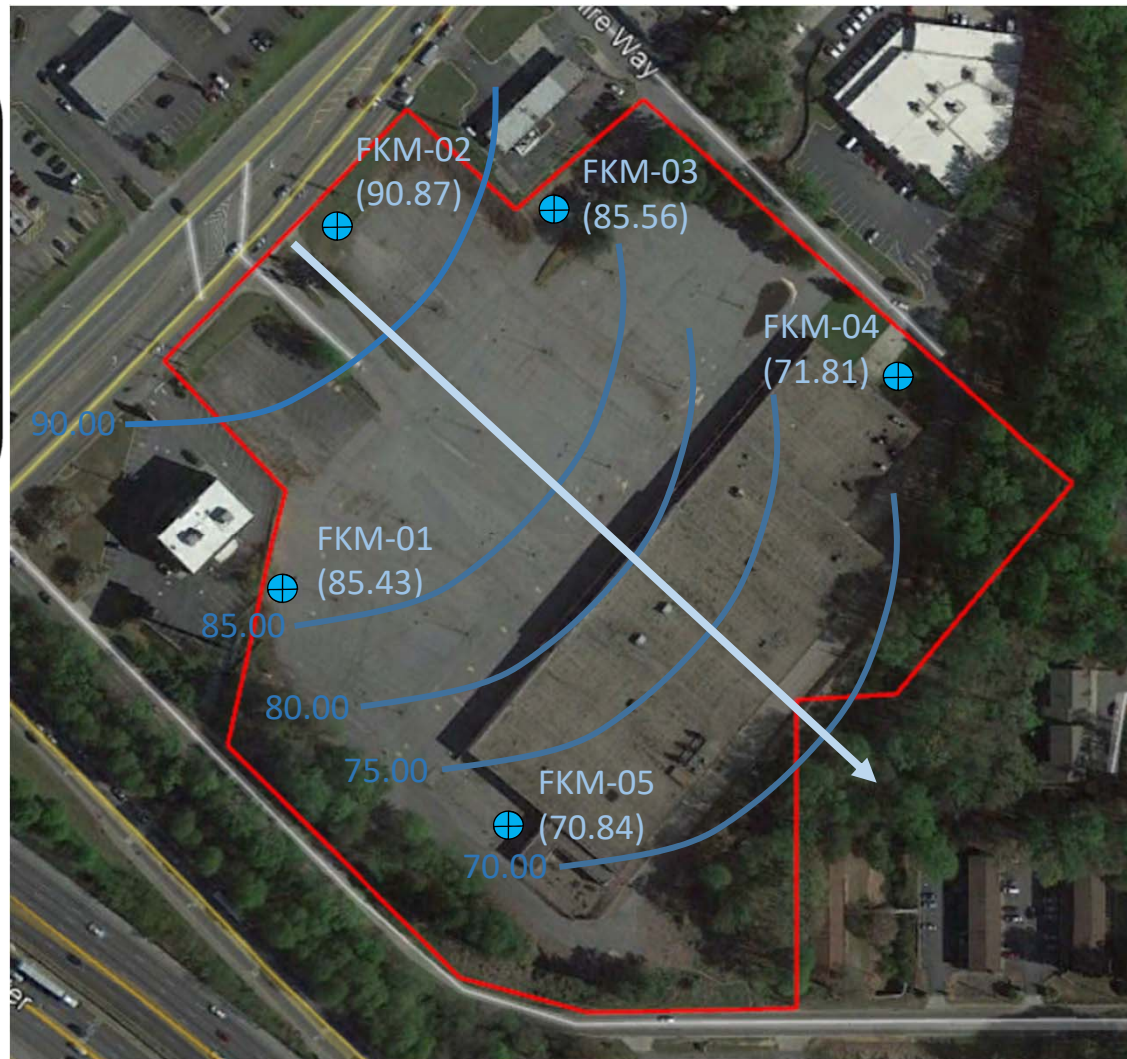
Approximate Scale

Phase II ESA
Former K-Mart, 5597 Buford Highway
Doraville, DeKalb County, Georgia
City of Doraville Downtown Development Authority Department
Cardno Project: 0002404000

Figure 4
Monitoring Well Location Map

LEGEND

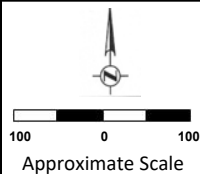
- Monitoring Well Location
- Groundwater Flow Direction
- Potentiometric Surface Contour
- FKM-01 Potentiometric Surface (85.43) Elevation
- Subject Property



Source: Google Earth



"This is not a map of survey."



Phase II ESA
Former K-Mart, 5597 Buford Highway
Doraville, DeKalb County, Georgia
City of Doraville Downtown Development Authority Department
Cardno Project: 0002404000

Figure 5
Groundwater Flow Direction Map

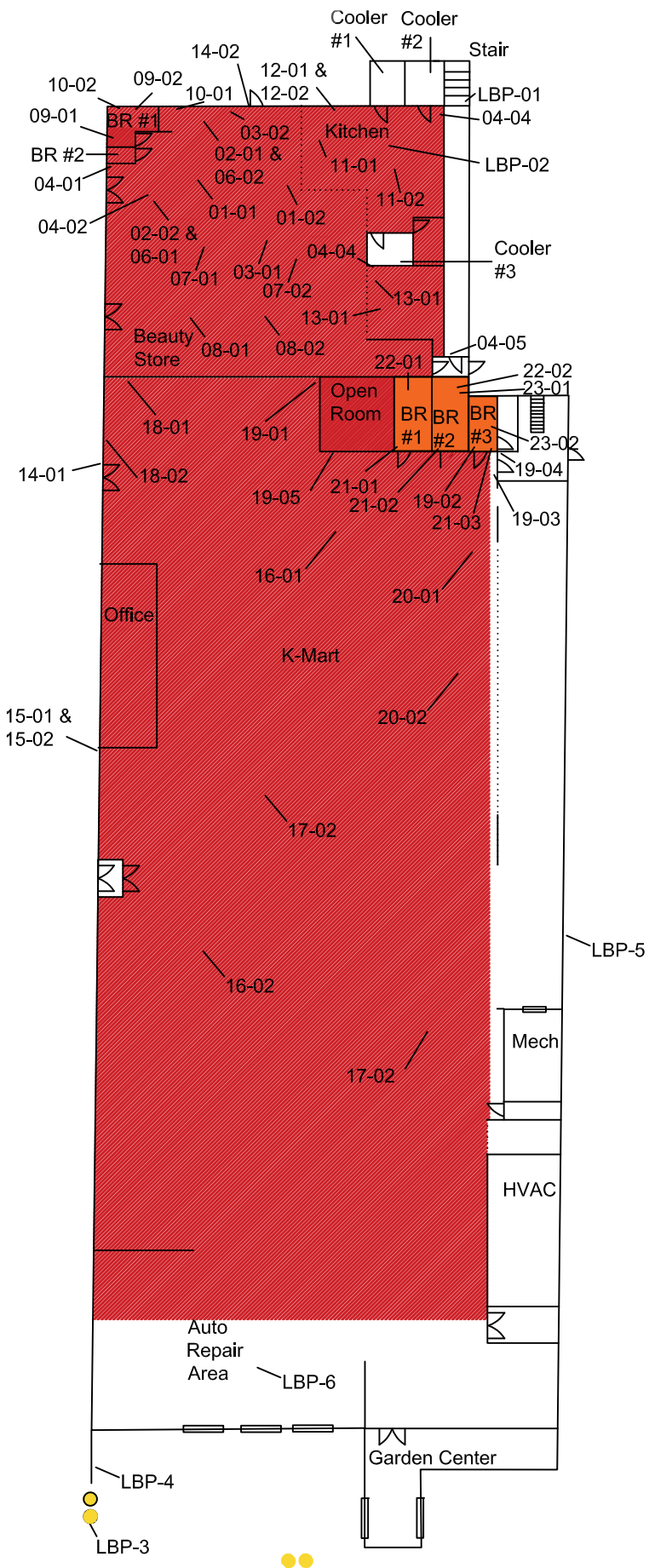


Figure 6
Asbestos and Lead-Based Paint
Sample and Material Location Map

Phase II ESA
 Former K-Mart, 5597 Buford Highway
 Doraville, DeKalb County, Georgia
 City of Doraville Downtown Development Authority
 Cardno Project: 000240400

Key

01-01 - Asbestos Sample Location
 LBP-01 - Lead-Based Paint Sample Location

Orange - Confirmed ACM Ceramic Walling

Red - Confirmed ACM Black Mastic
 (*locations estimated)

Yellow Dot - Confirmed LBP Concrete Poles



Tables

TABLE 1: OVA Headspace Screening Summary

Facility Name: Former K-MART

See Notes at end of Table

Sample				OVA/PID	Comments
Boring/ Well No.	Date Collected	Depth to Water (feet)	Sample Interval (fbis)	OVA/PID Reading (ppm)	
B-1	12/13/17	~20'	1	0	
			2	0	
			3	0	
			4	0	
			5	0	
			5-7	0	
			7-9	0	
			9-11	0	
			11-13	0	
			13-15	0	
			15-17	0	
			17-19	0	
			19-21	0	Collected Soil Sample From 19-21'
			21-23	0.1	
			23-25	NR	
B-2	12/13/17	~14'	1	0	
			2	0	
			3	0	
			4	0	
			5	11.2	
			5-7	0	
			7-9	0	
			9-11	2.4	Collected Soil Sample From 9-11'
			11-13	0	
			13-15	0.5	
			15-17	0	
			17-19	0	
			19-21	0	
			21-23	NR	
			23-25	NR	
B-3	12/13/17	~30'	1	0	
			2	0	
			3	0	
			4	0	
			5	0	
			5-7	0	
			7-9	0	
			9-11	0.1	
			11-13	0	
			13-15	12.5	
			15-17	0	
			17-19	0	
			19-21	639	
			21-23	0	
			23-25	678	Collected Soil Sample From 23-25'
			25-27	0	
			27-29	0	
			29-31	2.6	
			31-33	0	
			33-35	0	
B-4	12/13/17	~19'	1	0	
			2	0	
			3	0	
			4	0	
			5	0.3	
			5-7	0	
			7-9	0	
			9-11	0.3	
			11-13	0	
			13-15	0.3	
			15-17	0	
			17-19	0.1	
			19-21	0	
			21-23	0	Collected Soil Sample From 21-23
			23-25	1	

TABLE 1: OVA Headspace Screening Summary

Facility Name: Former K-MART

See Notes at end of Table

Sample				OVA/PID	Comments
Boring/ Well No.	Date Collected	Depth to Water (feet)	Sample Interval (fbis)	OVA/PID Reading (ppm)	
B-5	12/14/17	~15'	1	0	
			2	0	
			3	0	
			4	0	
			5	0	
			5-7	0	
			7-9	0	
			9-11	0.1	Collected Soil Sample From '9-11
			11-13	0	
			13-15	0	
			15-17	0	
			17-19	0	
			19-21	0	
			21-23	NR	
			23-25	NR	
B-6	12/14/17	GW not encountered	1	0	
			2	0	
			3	1.2	
			4	0	
			5	0	
			5-7	0.3	Collected Soil Sample From '5-7
			7-9	0	
			9-11	0	
			11-13	0.4	
			13-15	0	
			15-17	0	
			17-19	0.3	
			19-21	0	
			21-23	NR	
			23-25	NR	
B-7	12/14/17	~13'	1	0	
			2	0	
			3	0	
			4	0.9	
			5	0	
			5-7	0	
			7-9	1.1	
			9-11	0	
			11-13	0	
			13-15	0.8	Collected Soil Sample From '13-15
			15-17	0	
			17-19	0.3	
			19-21	0	
			21-23	NR	
			23-25	NR	

Notes:

NR = not recorded

OVA/PID = Organic Vapor Analyzer/Photoionization Detector ppm = parts per million

GW = groundwater

Table 2A: Soil Analytical Summary - BTEX and Lead

Facility Name: Former K-MART

Sample			OVA	Laboratory Analyses					Comments
Boring/ Well No.	Date Collected	Sample Interval (fbis)	Net OVA Reading (ppm)	Benzene (ug/Kg)	Ethyl-benzene (ug/Kg)	Toluene (ug/Kg)	Total Xylenes (ug/Kg)	Lead (mg/kg)	
B-1	12/13/17	19-21	0	BRL	BRL	BRL	BRL	5.26	
B-2	12/13/17	9-11	2.4	BRL	BRL	BRL	BRL	13.1	
B-3	12/13/17	23-25	678	BRL	37000	41000	170,000	10.1	
B-4	12/13/17	21-23	0	BRL	BRL	BRL	BRL	BRL	
B-5	12/14/17	9-11	0.1	BRL	BRL	BRL	BRL	6.93	
B-6	12/14/17	5-7	0.3	BRL	BRL	BRL	BRL	15.8	
B-7	12/14/17	13-15	0.8	BRL	BRL	BRL	BRL	18.2	
Notification Criterion				20	20000	14400	20000	400	

Notes: NA = Not Available

BRL = Below reporting limits

Concentrations in **bold** exceed Notification Criterion

Table 2B: Soil Analytical Summary - Non-Carcinogenic PAHs

Facility Name: Former K-MART

Sample			OVA	Laboratory Analyses											Comments
Boring/ Well No.	Date Collected	Sample Interval (fbls)	Net OVA Reading (ppm)	Naph- thalene (ug/kg)	1-Methyl- naph- thalene (ug/kg)	2-Methyl- naph- thalene (ug/kg)	Acen- aph- thene (ug/kg)	Acen- aph- thylene (ug/kg)	Anthra- cene (ug/kg)	Benzo (g,h,i) pery- (ug/kg)	Fluoran- thene (ug/kg)	Fluor- ene (ug/kg)	Phenan- threne (ug/kg)	Pyrene (ug/kg)	
B-1	12/13/17	19-21	0	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-2	12/13/17	9-11	2.4	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-3	12/13/17	23-25	678	5900	2500	5100	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-4	12/13/17	21-23	0	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-5	12/14/17	9-11	0.1	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-6	12/14/13	5-7	0.3	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
B-7	12/14/17	13-15	0.8	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	
Notification Criterion				100000	NA	NA	300000	130000	500000	500000	500000	360000	110000	500000	

Notes: NA = Not Available.

BRL = Below reporting limits

Concentrations in **bold** exceed the Notification Criterion

Table 3: Groundwater Analytical Summary - VOCs and PAHs

Facility Name: Former K-MART

Method	Parameter	Units	NC Level	FKM-01	FKM-02	FKM-03	FKM-04	FKM-05
	Date Collected			12/18/2017	12/19/2017	12/18/2017	12/18/2017	12/18/2017
				Result	Result	Result	Result	Result
Volatile Organic Compounds								
8260B	Benzene	ug/L	5	19	BRL	26	BRL	BRL
8260B	Ethylbenzene	ug/L	700	52	BRL	160	BRL	BRL
8260B	Toluene	ug/L	1000	51	BRL	420	BRL	BRL
8260B	Xylenes, Total	ug/L	10000	19	BRL	650	BRL	BRL
Polycyclic Aromatic Hydrocarbons (PAHs)								
8270D	Naphthalene	ug/L	20	130	BRL	40	BRL	BRL
8270D	1-Methylnaphthalene	ug/L	n/a	30	BRL	10	BRL	BRL
8270D	2-Methylnaphthalene	ug/L	n/a	55	BRL	17	BRL	BRL
8270D	Acenaphthene	ug/L	200	BRL	BRL	BRL	BRL	BRL
8270D	Acenaphthylene	ug/L	n/a	BRL	BRL	BRL	BRL	BRL
8270D	Anthracene	ug/L	n/a	BRL	BRL	BRL	BRL	BRL
8270D	Benzo(g,h,i)perylene	ug/L	n/a	BRL	BRL	BRL	BRL	BRL
8270D	Fluoranthene	ug/L	1000	BRL	BRL	BRL	BRL	BRL
8270D	Fluorene	ug/L	1000	BRL	BRL	BRL	BRL	BRL
8270D	Phenanthrene	ug/L	n/a	BRL	BRL	BRL	BRL	BRL
8270D	Pyrene	ug/L	1000	95.6	BRL	96.6	BRL	BRL
8270D	Benzo(a)pyrene	ug/L	0.2	BRL	BRL	BRL	BRL	BRL
8270D	Benzo(a)Anthracene	ug/L	0.1	BRL	BRL	BRL	BRL	BRL
8270D	Benzo(b)fluoranthene	ug/L	0.2	BRL	BRL	BRL	BRL	BRL
8270D	Benzo(k)fluoranthene	ug/L	n/a	BRL	BRL	BRL	BRL	BRL
8270D	Chrysene	ug/L	0.2	BRL	BRL	BRL	BRL	BRL
8270D	Dibenz(a,h)Anthracene	ug/L	0.3	BRL	BRL	BRL	BRL	BRL
8270D	Indeno(1,2,3-cd)pyrene	ug/L	0.4	BRL	BRL	BRL	BRL	BRL

NOTES:

NC = Notification Criteria

BRL = Below reporting limit

Concentrations in **bold** exceed NC

Table 4: Groundwater Elevation Summary

Facility Name: Former K-MART

Well Number	Casing Elevation	Depth of Well	Well Bottom Elevation	Depth to Water	Potentiometric Surface Elevation
FKM-01	101.03'	21.3'	79.73'	15.6'	85.43'
FKM-02	109.19'	28.64'	80.55'	18.32'	90.87'
FKM-03	106.51'	30.95'	75.56'	20.95'	85.56'
FKM-04	90.76'	23.75'	67.01'	18.95'	71.81'
FKM-05	91.14'	23.45'	67.69'	20.3'	70.84'

FORMER K-MART
5597 BUFORD HIGHWAY
DORAVILLE, GEORGIA

Table 5: Summary of Bulk Sample Analysis and Assessment

HA ID	Date Collected	Building Area	HA Description	Material Location	Percent and Type of Asbestos Detected ¹	Estimated Quantity	Type of ACM ²	Friability ³	Physical Condition
01-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, white with marks	Main room	NAD	n/a	n/a	NF	Good
01-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, white with marks	Main room	NAD	n/a	n/a	NF	Good
02-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, grey with marks	Main room	NAD	n/a	n/a	NF	Good
02-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, grey with marks	Main room	NAD	n/a	n/a	NF	Good
03-01	12/15/17	Beauty Store	Drop ceiling tile, 2'x4', white with pinholes and cuts	Main room	NAD	n/a	n/a	NF	Good
03-02	12/15/17	Beauty Store	Drop ceiling tile, 2'x4', white with pinholes and cuts	Main room	NAD	n/a	n/a	NF	Good
04-01	12/15/17	Beauty Store	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good
04-02	12/15/17	Beauty Store	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good
04-03	12/15/17	Beauty Store	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good
04-04	12/15/17	Beauty Store	Drywall / joint compound, walls	Kitchen Area	NAD	n/a	n/a	F	Good
04-05	12/15/17	Beauty Store	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good
05-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, red, under HA 01 and 02	Main room	NM*	n/a	n/a	NF	Good
05-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, red, under HA 01 and 02	Main room	NM*	n/a	n/a	NF	Good
06-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, gold, under HA 01 and 02	Main room	NAD	n/a	n/a	NF	Good
06-01A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
06-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, gold, under HA 01 and 02	Main room	NAD	n/a	n/a	NF	Good
06-02A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
07-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, brownish	Main room	NAD	n/a	n/a	NF	Good
07-01A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
07-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, brownish	Main room	NAD	n/a	n/a	NF	Good

07-02A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
08-01	12/15/17	Beauty Store	Carpet mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
08-02	12/15/17	Beauty Store	Carpet mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
09-01	12/15/17	Beauty Store	Ceramic tile flooring, brown, square	BR #2	NAD	n/a	n/a	NF	Good
09-01A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
09-02	12/15/17	Beauty Store	Ceramic tile flooring, brown, square	BR #1	NAD	n/a	n/a	NF	Good
09-02A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
10-01	12/15/17	Beauty Store	Cove base mastic, brown	Main room	NAD	n/a	n/a	NF	Good
10-02	12/15/17	Beauty Store	Cove base mastic, brown	BR #1	NAD	n/a	n/a	NF	Good
11-01	12/15/17	Beauty Store	Ceramic tile, square, fire brick pattern	Kitchen Area	NAD	n/a	n/a	NF	Good
11-01A	12/15/17	Beauty Store	Underlying black mastic	Kitchen Area	3% CH	18,000 SF	Misc. Cat I	NF	Good
11-02	12/15/17	Beauty Store	Ceramic tile, square, fire brick pattern	Kitchen Area	NAD	n/a	n/a	NF	Good
11-02A	12/15/17	Beauty Store	Underlying black mastic	Kitchen Area	3% CH	18,000 SF	Misc. Cat I	NF	Good
12-01	12/15/17	Beauty Store	Insulation, brown, behind drywall	Kitchen Area	NAD	n/a	n/a	NF	Good
12-02	12/15/17	Beauty Store	Insulation, brown, behind drywall	Kitchen Area	NAD	n/a	n/a	NF	Good
13-01	12/15/17	Beauty Store	12"x12" vinyl floor tile, dirty green	Main room	NAD	n/a	n/a	NF	Good
13-02	12/15/17	Beauty Store	12"x12" vinyl floor tile, dirty green	Main room	NAD	n/a	n/a	NF	Good
13-02A	12/15/17	Beauty Store	Underlying black mastic	Main room	3% CH	18,000 SF	Misc. Cat I	NF	Good
14-01	12/15/17	Exterior	White door caulk	Exterior	NAD	n/a	n/a	NF	Good
14-02	12/15/17	Exterior	White door caulk	Exterior	NAD	n/a	n/a	NF	Good
15-01	12/15/17	Exterior	White expansion caulk	Exterior	NAD	n/a	n/a	NF	Good
15-02	12/15/17	Exterior	White expansion caulk	Exterior	NAD	n/a	n/a	NF	Good
16-01	12/18/17	K-Mart	12"x12" vinyl floor tile, beige	Main room	NAD	n/a	n/a	NF	Good
16-01A	12/18/17	K-Mart	Underlying black mastic	Main room	3% CH	80,000 SF	Misc. Cat I	NF	Good
16-02	12/18/17	K-Mart	12"x12" vinyl floor tile, beige	Main room	NAD	n/a	n/a	NF	Good
17-01	12/18/17	K-Mart	Drop ceiling tile, 2'x4', white with pinholes and cuts	Main room	NAD	n/a	n/a	NF	Good
17-02	12/18/17	K-Mart	Drop ceiling tile, 2'x4', white with pinholes and cuts	Main room	NAD	n/a	n/a	NF	Good
18-01	12/18/17	K-Mart	Cove base mastic, brown	Main room	NAD	n/a	n/a	NF	Good
18-02	12/18/17	K-Mart	Cove base mastic, brown	Main room	NAD	n/a	n/a	NF	Good
19-01	12/18/17	K-Mart	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good
19-02	12/18/17	K-Mart	Drywall / joint compound, walls	BR #3	NAD	n/a	n/a	F	Good
19-03	12/19/17	K-Mart	Drywall / joint compound, walls	Main room	NAD	n/a	n/a	F	Good

19-04	12/19/17	K-Mart	Drywall / joint compound, walls	Back room	NAD	n/a	n/a	F	Good
19-05	12/19/17	K-Mart	Drywall / joint compound, walls	Main room	<1% CH	n/a	n/a	F	Good
20-01	12/18/17	K-Mart	Pipe insulation with mastic	Main room	NAD	n/a	n/a	NF	Good
20-02	12/19/17	K-Mart	Pipe insulation with mastic	Main room	NAD	n/a	n/a	NF	Good
21-01	12/19/17	K-Mart	Drywall / joint compound, ceiling	BR #1	NAD	n/a	n/a	F	Good
21-02	12/19/17	K-Mart	Drywall / joint compound, ceiling	BR #2	NAD	n/a	n/a	F	Good
21-03	12/19/17	K-Mart	Drywall / joint compound, ceiling	BR #3	<1% CH	n/a	n/a	F	Good
22-01	12/19/17	K-Mart	Ceramic flooring, square, grey	BR #1	NAD	n/a	n/a	NF	Good
22-02	12/19/17	K-Mart	Ceramic flooring, square, grey	BR #2	NAD	n/a	n/a	NF	Good
22-02A	12/18/17	K-Mart	Underlying black mastic	Main room	3% CH	80,000 SF	Misc. Cat I	NF	Good
23-01	12/19/17	K-Mart	Ceramic walling, square, white	BR #2	2% CH	300 SF	Misc. Cat II	NF	Good
23-02	12/19/17	K-Mart	Ceramic walling, square, white	BR #2	2% CH	300 SF	Misc. Cat II	NF	Good

*Not measured as samples not received by lab

Notes:

(1) CH = Chrysotile; AM = Amosite; CR = Crocidolite; AN = Anthophyllite; AC = Actinolite; NAD = No Asbestos Detected

(2) Misc = Miscellaneous; TSI = Thermal System Insulation

(3) F = Friable; NF = Non friable. For ACMs only: I = Non-Friable Category I; II = Non-Friable Category II

NM = not measured

LF = linear feet

n/a = not applicable

SF = square feet

Table 6A: EPA VISL Calculator Results
Monitoring Well: FKM-01
Facility Name: Former K-MART

Substance	Site Groundwater Concentration (µg/L)	Calculated Indoor Air Concentration (µg/m ³)	VI Carcinogenic Risk	VI Hazard
Benzene	19	3.94E+01	1.1E-05	1.3E-01
Ethylbenzene	52	1.49E+01	1.3E-05	1.4E-02
Naphthalene	130	2.02E+00	2.4E-05	6.5E-01
Toluene	51	1.25E+01	No IUR	2.4E-03
Xylenes, total	19	4.59E+00	No IUR	4.4E-02

Notes:

EPA VISL - United States Environmental Protection Agency Vapor Intrusion Screening Level

Substances displayed are those with site groundwater analytical detections and which have inhalation toxicity data.

Site Groundwater Concentration values taken from the highest site groundwater analytical detections.

Calculated Indoor Air Concentration determined from the site groundwater concentration, using the EPA VISL Calculator with generic attenuation factor for indoor air from groundwater

VI Carcinogenic Risk - carcinogenic risk from the vapor intrusion pathway for the substance, calculated using the EPA VISL Calculator with default exposure parameters for commercial exposure. Concentrations in **bold** exceed the GA EPD Target Risk for Carcinogens (1.00E-05).

VI Hazard - noncancer hazard from the vapor intrusion pathway for the chemical, calculated using the EPA VISL Calculator with default parameters for commercial exposure. Concentrations in **bold** exceed the Target Hazard Quotient for Non-Carcinogens (1).

IUR - Inhalation Unit Risk factor, from the EPA Regional Screening Levels (RSL) worksheet. This is the potential carcinogenic risk per unit concentration exposure associated with inhalation of the chemical.

Table 6B: EPA VISL Calculator Results
Monitoring Well: FKM-03
Facility Name: Former K-MART

Substance	Site Groundwater Concentration (µg/L)	Calculated Indoor Air Concentration (µg/m ³)	VI Carcinogenic Risk	VI Hazard
Benzene	26	5.39E+00	1.5E-05	1.7E-01
Ethylbenzene	160	4.60E+01	4.1E-05	4.4E-02
Naphthalene	40	6.22E-01	7.5E-06	2.0E-01
Toluene	420	1.03E+02	No IUR	2.0E-02
Xylenes, total	650	1.57E+02	No IUR	1.5E+00

Notes:

EPA VISL - United States Environmental Protection Agency Vapor Intrusion Screening Level

Substances displayed are those with site groundwater analytical detections and which have inhalation toxicity data.

Site Groundwater Concentration values taken from the highest site groundwater analytical detections.

Calculated Indoor Air Concentration determined from the site groundwater concentration, using the EPA VISL Calculator with generic attenuation factor for indoor air from groundwater

VI Carcinogenic Risk - carcinogenic risk from the vapor intrusion pathway for the substance, calculated using the EPA VISL Calculator with default exposure parameters for commercial exposure. Concentrations in **bold** exceed the GA EPD Target Risk for Carcinogens (1.00E-05).

VI Hazard - noncancer hazard from the vapor intrusion pathway for the chemical, calculated using the EPA VISL Calculator with default parameters for commercial exposure. Concentrations in **bold** exceed the Target Hazard Quotient for Non-Carcinogens (1).

IUR - Inhalation Unit Risk factor, from the EPA Regional Screening Levels (RSL) worksheet. This is the potential carcinogenic risk per unit concentration exposure associated with inhalation of the chemical.

Appendix D

Excerpts from United's August 2016 Limited ACM and LBP Assessment

REPORT

Limited Asbestos & Limited Lead Based Paint Sampling Nexus Town Center Mixed-Use Development Doraville, Georgia

Project Number:
2016.5580.01

Report Date:
August 18, 2016



August 18, 2016

Ms. Patty Farr
Macallan Group

Via Email: p.farr@macallangroup.com

RE: Report of Limited Lead Based Paint and Asbestos Assessment
Nexus Town Center Mixed-Use Development
5597 Buford Highway NE
Doraville, Georgia
Project No. 2016.5580.01

Dear Ms. Farr

United Consulting has completed the Limited Lead-Based Paint and Limited Asbestos Sampling at the above referenced site located at 5597 Buford Highway in Doraville, Georgia, hereinafter referred to as the Project Site. The testing activities were performed in substantial conformance with industry standards. We appreciate the opportunity to assist you with this project and look forward to assisting you with future projects. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

UNITED CONSULTING

Seth H. Hobson
Senior Environmental Specialist

Scott D. Smelter
Principal

AOA/SHH/TJB/slv

SP: 2016.5580.01.asb.lbp

INTRODUCTION

United Consulting was retained by the **Macallan Group** to perform sampling for Asbestos Containing Materials (ACM) and Lead Based Paint (LBP). The purpose of this survey was to collect and test representative samples of common building materials for the presence of asbestos fibers and collect and test representative paint films for lead from painted surfaces that may be present at the Project Site and disturbed during future demolition activities. Photographs of the Project Site structure is included in Appendix B.

The asbestos bulk sample collection activities were performed by United Consulting representative, Ms. Abigail Akinosho. Ms. Akinosho is accredited as an Asbestos Inspector in accordance with the Asbestos Hazard Emergency Response Act (AHERA), Inspector Certificate Number 4786. The lead-based paint survey was performed by United Consulting representative, Mr. Ryan Griffin. Mr. Griffin is a licensed lead based paint inspector with the State of Georgia, certification number 60 INSO 2282. Both certifications and that of the laboratory used for this investigation are reproduced in Appendix C.

SCOPE

The scope of this assessment was outlined in United Consulting's proposal dated June 16, 2016. In performing this assessment, United Consulting conducted the following activities:

1. Conducted sampling of identified suspect asbestos containing materials (SACM) and submitted samples to an independent laboratory for analysis.
2. Conducted sampling of representative paint films from within the Project Site structure and submitted samples to an independent laboratory for analysis of lead.
3. Prepared this report of the sampling activities and findings.

DESCRIPTION OF FACILITIES

The Project Site contained a 117,261 square-foot commercial structure. The structure was split into two suites: one suite which was formerly occupied by a Kmart department store and "Unit B" was a former beauty salon and supply warehouse. The building was constructed on a concrete slab with a low slope, graveled roof. The exterior of the structure was of block construction with a grouted finish. The rear of the Kmart suite was divided into multiple rooms that included a mechanical room, an air handler room, and a boiler room. Interior building materials within this suite included drywall systems components, numerous styles of 12"x12" floor tiles, 2"x4" ceiling tiles, and cove bases.

“Unit B” consisted of a 1.5-story suite. The lower portion of the suite contained an open floor plan with few support columns throughout the suite. The upper portion contained a bathroom, washroom, and open area with roof access. Interior building materials consisted of drywall systems components, vinyl sheet flooring, several styles of 12”x12” floor tiles, and cove bases.

It is our understanding that the client intends to demolish the Project Site structure.

INACCESSIBLE AREAS/LIMITING CONDITIONS

Two doors were locked within “Unit B” of the Project Site; therefore, these rooms were inaccessible.

I. LIMITED ASBESTOS SURVEY

Bulk Sample Collection

Overview

Bulk sampling was performed in substantial conformance with the United States Environmental Protection Agency’s (EPA’s), "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 560/5-85-024, 1985). Bulk sampling was performed at the Project Site, on August 1, 2016 by Ms. Abigail Akinosho. Ms. Akinosho is accredited as an Asbestos Inspector in accordance with the Asbestos Hazard Emergency Response Act (AHERA), Inspector Certificate Number 4786. A copy of this certification is included in Appendix C.

Sample Location

Sample locations were randomly chosen in the field, based on the identification of suspect asbestos-containing material (SACM). A distributed sampling plan based on a randomized sampling scheme was not used for this sampling program. Samples were collected from areas deemed safe and accessible.

Procedure

Samples were collected by wetting the material to be sampled, by extracting a representative section of the suspect material and by placing the material in a sample container. Each sample was assigned a unique sample number and delivered to an independent laboratory (Analytical Environmental Services, Inc.) for analysis. Chain-of-Custody was documented and retained on-file. The laboratory results are attached in Appendix D.

Bulk Sample Analysis

The bulk samples were tested for detectable concentrations of asbestos (greater than one percent asbestos) utilizing Polarized PLM and dispersion staining techniques. The testing method used was the “Interim Method for the Determination of Asbestos in Bulk Insulation Samples” (EPA 600/M4-82020, as amended). Materials containing one percent or more asbestos are considered asbestos containing materials (ACM) and are regulated. Bulk sample testing was performed by Analytical Environmental Services, Inc., a successful participant in the National Voluntary Laboratory Accreditation Program (NVLAP), certificate number 102082-0.

BULK SAMPLE RESULTS

General

United Consulting collected 55 bulk samples of suspect asbestos-containing materials (SACM) from the Project Site structures during this sampling event. The items included flooring tiles, drywall materials, TSI, and roofing materials. The survey results discussed below have been compiled by material location. Photocopies of the Laboratory Results are included in Appendix D. Sample locations are listed in the tables below. A summary of the bulk sample results is presented in Table 1.

Asbestos Containing Materials

A total of 55 samples of SACM were collected from the Project Site. ***Ten of these samples reported regulated concentrations of asbestos fibers, and included:***

- Black Floor Tile Mastic;
- Green Floor Tile;
- Vinyl Sheet Flooring;
- Yellow Floor Tile;
- Gray Floor Tile;
- Roof Flashing; and
- Roof Penetration Mastics.

ACM DATA EVALUATION/ASSESSMENT

Regulated concentrations of asbestos fibers **were identified** within ten of the samples collected from the Project Site.

Various floor tile and associated black mastic samples were collected throughout the structure. Based on this sampling, the observed black mastics should be considered asbestos containing. Further, floor tile samples collected from the Project Site including the green, yellow, and gray floor tile systems were also identified as asbestos containing. It is United Consulting’s

experience that asbestos containing black mastics cannot be separated from their associated floor tile systems; therefore, all floor tile and associated black mastics should be considered asbestos containing.

One sample of vinyl sheet flooring was collected from “Unit B” of the Project Site and reported ACM. United Consulting recommends treating all vinyl sheet flooring as regulated ACM.

Two samples of roof flashing were collected from the Project Site. Both samples were found to be ACM. Two samples of black penetration mastic were collected from the roof system. One of those samples contained regulated concentrations of asbestos fibers. Based on the conducted roof sampling, the flashing systems and penetration mastics on the roof are asbestos containing.

In the event that suspect ACM are encountered within previously inaccessible building areas (within block walls, etc.) at the time of demolition, United Consulting should be contacted and proper samples of the suspect materials should be collected and submitted for testing, prior to continuing demolition activities which could disturb these materials and potentially result in an asbestos fiber release.

The National Emissions Standard for Hazardous Air Pollutants (NESHAP) requires the removal of ACM prior to activities, which would disturb them. United Consulting recommends that the asbestos-containing materials be removed, prior to demolition by a qualified asbestos abatement contractor, using State of Georgia accredited personnel, in accordance with applicable federal, state and local regulations governing the removal of asbestos-containing material.

A Ten-Day Notification should be forwarded to the Georgia Department of Natural Resources (DNR), Georgia Environmental Protection Division (EPD), by the building owner or demolition contractor prior to the start of any building demolition activities.

A Georgia licensed Asbestos Removal Contractor should be employed to remove asbestos-containing materials (ACM) and appropriately contain, transport, and dispose of asbestos containing waste materials. Friable material (such as pipe insulation) should be appropriately addressed in a timely manner, whether any demolition or renovation is planned or not. ACM that is not friable (e.g., floor tile and mastic) should be addressed before any demolition or renovation work begins.

II. LIMITED LEAD BASED PAINT SURVEY

The purpose of the Lead-Based Paint Testing was to visually identify suspect lead-based paint films at the Project Site, and to test the paint films for detectable concentrations of lead by collecting representative paint chip samples from the Project Site. United Consulting performed the survey in substantial conformance to industry standards.

LEAD BASED PAINT PROCEDURES

Sampling Procedures

Paint film samples were obtained by either cutting or coring the film and substrate materials. Each sample was removed using a clean knife or core, and placed in a new dedicated container. Each container was separately labeled and taken to the laboratory for analytical testing. United Consulting performed the sampling in substantial conformance to industry standards.

Testing Procedures

The film samples were tested for total lead using atomic absorption spectrometry (AAS) techniques. The testing was performed at an independent analytical laboratory certified in the State of Georgia. Copies of chain of custodies are included with the laboratory report in Appendix D.

LEAD BASED PAINT TESTING RESULTS

A total of 22 paint chip samples were collected during the site visit from the Project Site structures. These samples were submitted for laboratory analysis of lead.

Ten of the 22 paint samples collected from the Project Site were found to contain lead at concentrations greater than the laboratory reporting limit. ***Eight of those samples were found to contain lead above the current HUD action level of .5% by weight.*** Table 2 lists the sample descriptions and analytical results. The remaining samples were below the laboratory reporting limit for lead. Copies of the laboratory results are included in Appendix D.

LEAD-BASED PAINT ASSESSMENT

Lead based paint films have been identified at the Project Site. If the demolition waste will not be disposed on in a permitted lined landfill, the demolition debris containing lead based paint materials should be analyzed via the lead toxicity characteristic leaching procedure (TCLP), prior to disposal. If the demolition debris will be hauled to a construction debris type landfill, the identified lead based paint coated materials should be analyzed for lead leachate via TCLP analysis.

Solid waste which leaches hazardous concentrations of lead greater than 5.0 parts per million (ppm) by TCLP, must be properly disposed of in an appropriately permitted hazardous waste landfill. Samples should be obtained and submitted for TCLP analysis for any confirmed lead based painted material which is to be brought to a landfill for disposal. The building owner or renovation contractor must forward a proper Ten Day Notification to the Georgia Department of Natural Resources, Environmental Protection Division (EPD) prior to the start of any building renovation/demolition activities.

Occupational Safety and Health Administration (OSHA) regulations require that workers be protected from exposure to lead via proper engineering controls and appropriate levels of personal protective equipment as per Title 29 of the Code of Federal Regulations, part 1926.62 (29 CFR 1926.62).

LIMITATIONS

The conclusions presented in this Limited Asbestos and Lead-Based Paint Testing report are based on the laboratory results and condition of the materials identified. Asbestos and Lead concentrations will vary between sample locations. Our assessment of the materials at the Project Site is a professional opinion arrived at through the method and procedures accepted by and standard to the industry. No other warranty or guarantee is expressed or implied.

Representative areas of the Project Site were sampled on a limited basis. A Final Asbestos & Lead Based Paint Survey should be conducted prior to any renovation or demolition of the buildings, in order to obtain a more complete representation of the amount of asbestos and lead based paint present. ***Preparation of abatement design bid documents or scopes of work for abatement, will require additional sampling and definition of the extent of the material.*** United Consulting shall not be held responsible for errors, miscalculations, assumptions, misinterpretations or other problems or liabilities arising from, or associated with, firms or individuals bidding on asbestos abatement work that rely solely, or in part, on this document.

This report has been prepared on behalf of the client. Should any other person, partnership, or corporation desire to rely upon this report, it will be necessary for United Consulting to update the report for the new user.

APPENDICES

- Appendix A Tables
- Appendix B Photographic Documentation
- Appendix C Certifications
- Appendix D Laboratory Results
- Appendix E Asbestos Notification Requirements for Demolition, Renovation, or Abatement Projects

UNITED CONSULTING

APPENDIX A – TABLES

TABLE 1: SUMMARY OF ASBESTOS TEST RESULTS

SAMPLE No.	COMPONENT	LOCATION	FRIABILITY/ CONDITION	ASBESTOS (%)
Former Kmart				
A-1	Drywall Systems Components	Sales Floor	Friable	ND
A-2	12x12 Tan Floor Tile & Mastic	Sales Floor	Non-friable	ND – Floor Tile 3% CH – Mastic
A-3	2x4 Textured Ceiling Tile	Sales Floor	Friable	ND
A-4	Black Cove Base & Glue	Sales Floor	Non-friable	ND
A-5	12x12 Tan Floor Tile & Mastic	Sales Floor	Non-friable	ND – Floor Tile 3% CH - Mastic
A-6	Drywall Systems Components	Sales Floor	Friable	ND
A-7	12x12 Grey Floor Tile & Mastic	Sales Floor	Non-friable	ND
A-8	2x4 Textured Ceiling Tile	Sales Floor	Friable	ND
A-9	Black Cove Base & Glue	Sales Floor	Non-friable	ND
A-10	12x12 Green Floor Tile & Mastic	Sales Floor	Non-friable	ND
A-11	Drywall Systems Components	Sales Floor	Friable	ND
A-12	Thermal Systems Insulation	Sales Floor	Non-friable	ND
A-13	Thermal Systems Insulation Tape	Sales Floor	Non-friable	ND
A-14	Thermal Systems Insulation	Sales Floor	Non-friable	ND
A-15	Drywall Systems Components	Sales Floor	Friable	ND
A-16	12x12 Green Floor Tile & Mastic	Sales Floor	Non-friable	ND
A-17	12x12 Grey Floor Tile & Mastic	Sales Floor	Non-friable	ND
A-18	Black Cove Base & Glue	Sales Floor	Non-friable	ND
A-19	12x12 Green Floor Tile & Mastic	Sales Floor	Non-friable	2% CH – Flr Tile 3% CH - Mastic
A-20	Pipe Wrap	Sales Floor	Non-friable	ND
A-21	Pipe Wrap Tape	Sales Floor	Non-friable	ND
A-22	Pipe Wrap	Sales Floor	Non-friable	ND
A-23	12x12 Cream Floor Tile & Mastic	Sales Floor	Non-friable	ND
A-24	12x12 Green Striated FT & Mastic	Sales Floor	Non-friable	ND
A-25	Drywall Systems Components	Sales Floor	Friable	ND
A-26	2x4 Textured Ceiling Tile	Sales Floor	Friable	ND
A-27	Drywall Systems Components	Sales Floor	Friable	ND
A-28	Drywall Systems Components	Sales Floor	Friable	ND
A-29	Black Cove Base	Sales Floor	Non-friable	ND
A-30	2x4 Textured Ceiling Tile	Sales Floor	Friable	ND
“Unit B”				
A-31	Drywall Systems Components	2 nd Floor	Friable	ND

SAMPLE No.	COMPONENT	LOCATION	FRIABILITY/ CONDITION	ASBESTOS (%)
A-32	Vinyl Sheet Flooring	2 nd Floor	Non-friable	ND - Vinyl 3% CH - Backing
A-33	Thermal Systems Insulation Wrap	1 st Floor	Non-friable	ND
A-34	Thermal Systems Insulation	1 st Floor	Non-friable	ND
A-35	Pipe Wrap	1 st Floor	Non-friable	ND
A-36	Black Cove Base & Glue	1 st Floor	Non-friable	ND
A-37	Thermal Systems Insulation Wrap	1 st Floor	Non-friable	ND
A-38	Thermal Systems Insulation	1 st Floor	Non-friable	ND
A-39	Thermal Systems Insulation Wrap	1 st Floor	Non-friable	ND
A-40	12x12 Tan Floor Tile	1 st Floor	Non-friable	ND
A-41	12x12 White Floor Tile	1 st Floor	Non-friable	ND
A-42	12x12 Red Floor Tile	1 st Floor	Non-friable	ND – Flr Tile 3% CH - Mastic
A-43	12x12 Yellow Floor Tile	1 st Floor	Non-friable	3% CH – Flr Tile 3% CH - Mastic
A-44	12x12 Marbled Sheet Flooring	1 st Floor	Non-friable	ND
A-45	Drywall Systems Materials	1 st Floor	Friable	ND
A-46	12x12 Gray Floor Tile	1 st Floor	Non-friable	ND – Flr Tile 3% CH - Mastic
Roof				
A-47	Roof Core – Layers 1 through 3	Roof	Non-friable	ND
A-48	Roof Core – Layers 1 through 3	Roof	Non-friable	ND
A-49	Roof Core – Layers 1 through 3	Roof	Non-friable	ND
A-50	Roof Flashing – 2 Layers	Roof	Non-friable	25% CH – Layer 1
A-51	Black Penetration Mastic	Roof	Non-friable	5% CH – Layer 2
A-52	Black Penetration Mastic	Roof	Non-friable	ND
A-53	Roofing Tape & Mastic	Roof	Non-friable	ND
A-54	Roof Flashing - HVAC	Roof	Non-friable	25% CH
A-55	Black TSI Tape – 2” HVAC line	Roof	Non-friable	ND
ND – None Detected CH – Chrysotile Bold – Regulated asbestos containing material				

TABLE 2 – LEAD BASED PAINT SAMPLE RESULTS

SAMPLE NUMBER	LOCATION	COLOR	PERCENT LEAD BY WEIGHT
“Unit B”			
L-1	Column	White	1.69
L-2	Wooden Baseboard	Grey	BRL
L-3	Baseboard	Orange	6.70
L-4	Drywall	White	BRL
L-5	Drywall	Green	BRL
L-6	Door Trim	Black	BRL
L-7	Metal Door	Grey	BRL
L-8	Drywall	Light Green	BRL
Kmart			
L-9	Column	Grey	BRL
L-10	Column	Orange	0.0149
L-11	Column	White	BRL
L-12	Column	Cream	BRL
L-13	Column	Red	0.792
Exterior			
L-14	Column	Peach	BRL
L-15	Wall	Cream	BRL
L-16	Sidewalk	Yellow	3.32
L-17	Lamp Post	Yellow	3.39
L-18	Lamp Post	Grey	2.07
L-19	Barricade Post	Yellow	2.55
L-20	Rear Wall	Cream	0.0234
L-21	Sprinkler	Red	8.57
L-22	Column	Peach	BRL
Bolded items indicate a lead concentrations above the current HUD action level of 0.5% lead by weight BRL= Not detected at the Reporting Limit			